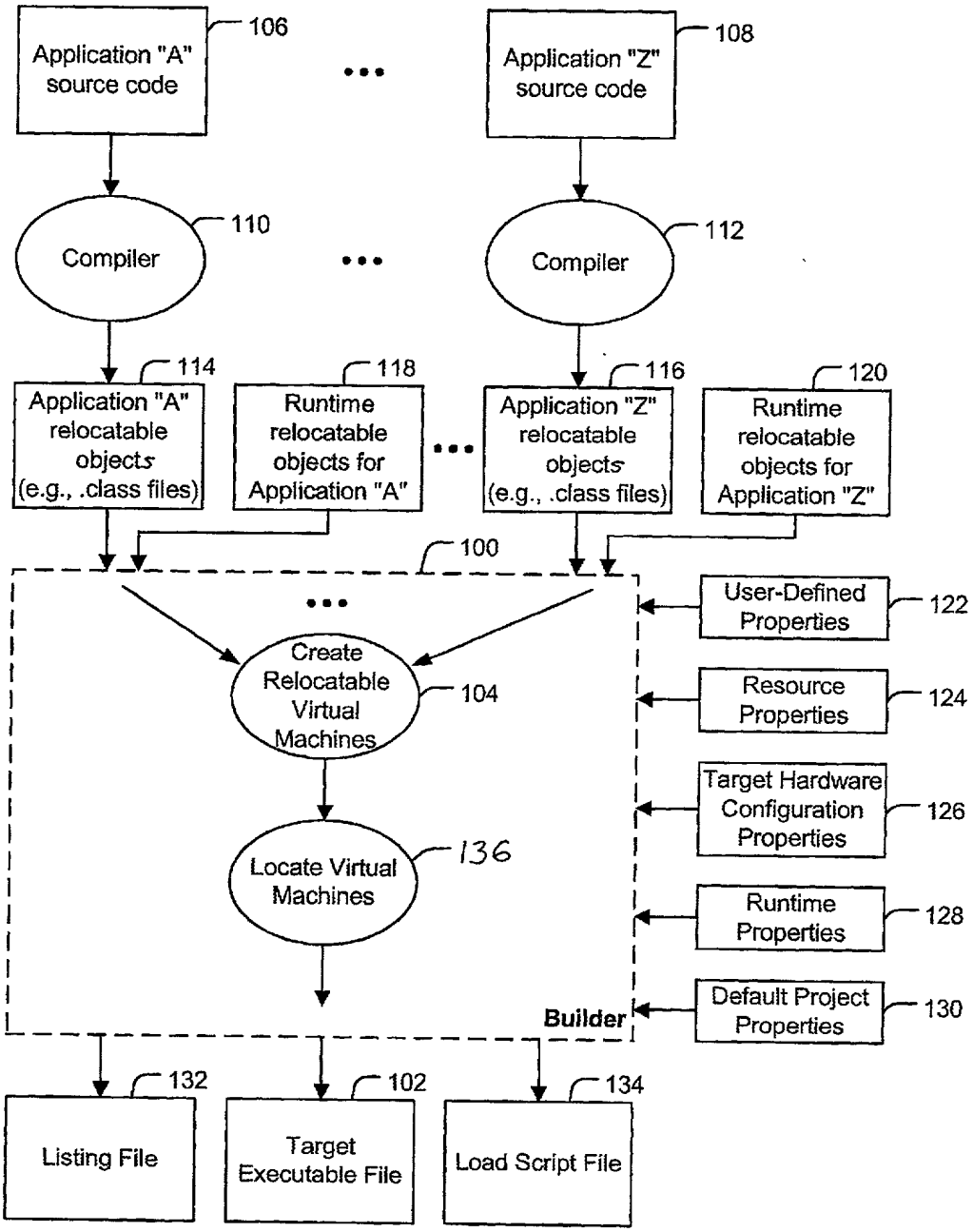

Application "A" source code
106
Application "Z" source code
108
Compiler
110
Compiler
112
Application "A" relocatable objects (e.g., .class files)
114
Runtime relocatable objects for Application "A"
118
Application "Z" relocatable objects (e.g., .class files)
116
Runtime relocatable objects for Application "Z"
120
100
Create Relocatable Virtual Machines
104
Locate Virtual Machines
136
Builder
User-Defined Properties
122
Resource Properties
124
Target Hardware Configuration Properties
126
Runtime Properties
128
Default Project Properties
130
Listing File
132
Target Executable File
102
Load Script File
134

Fig. 1

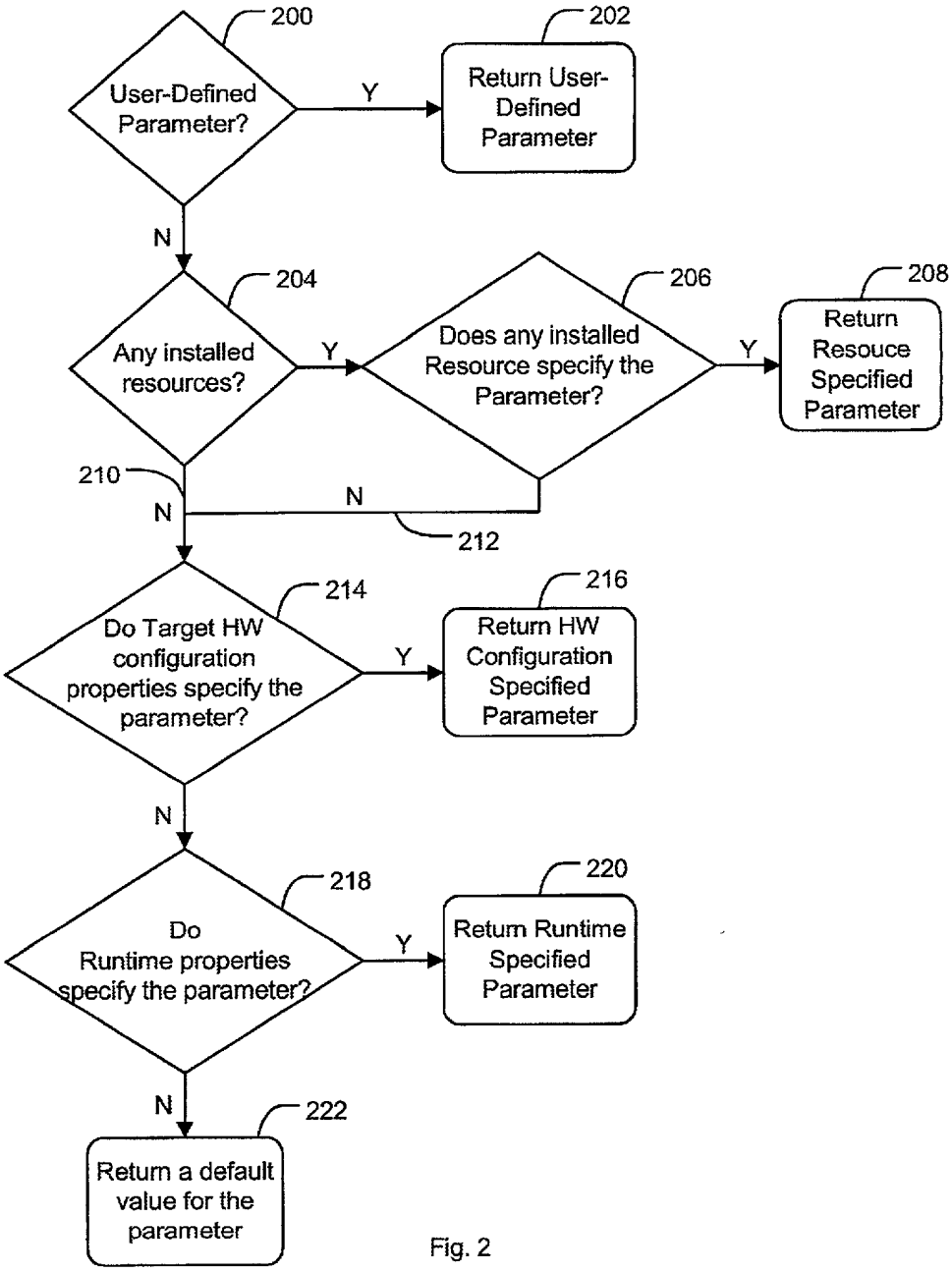

200
User-Defined Parameter?
Y
202
Return User-Defined Parameter
N
204
Any installed resources?
Y
206
Does any installed Resource specify the Parameter?
Y
208
Return Resouce Specified Parameter
210
N
N
212
214
Do Target HW configuration properties specify the parameter?
Y
216
Return HW Configuration Specified Parameter
N
218
Do Runtime properties specify the parameter?
Y
220
Return Runtime Specified Parameter
N
222
Return a default value for the parameter

Fig. 2

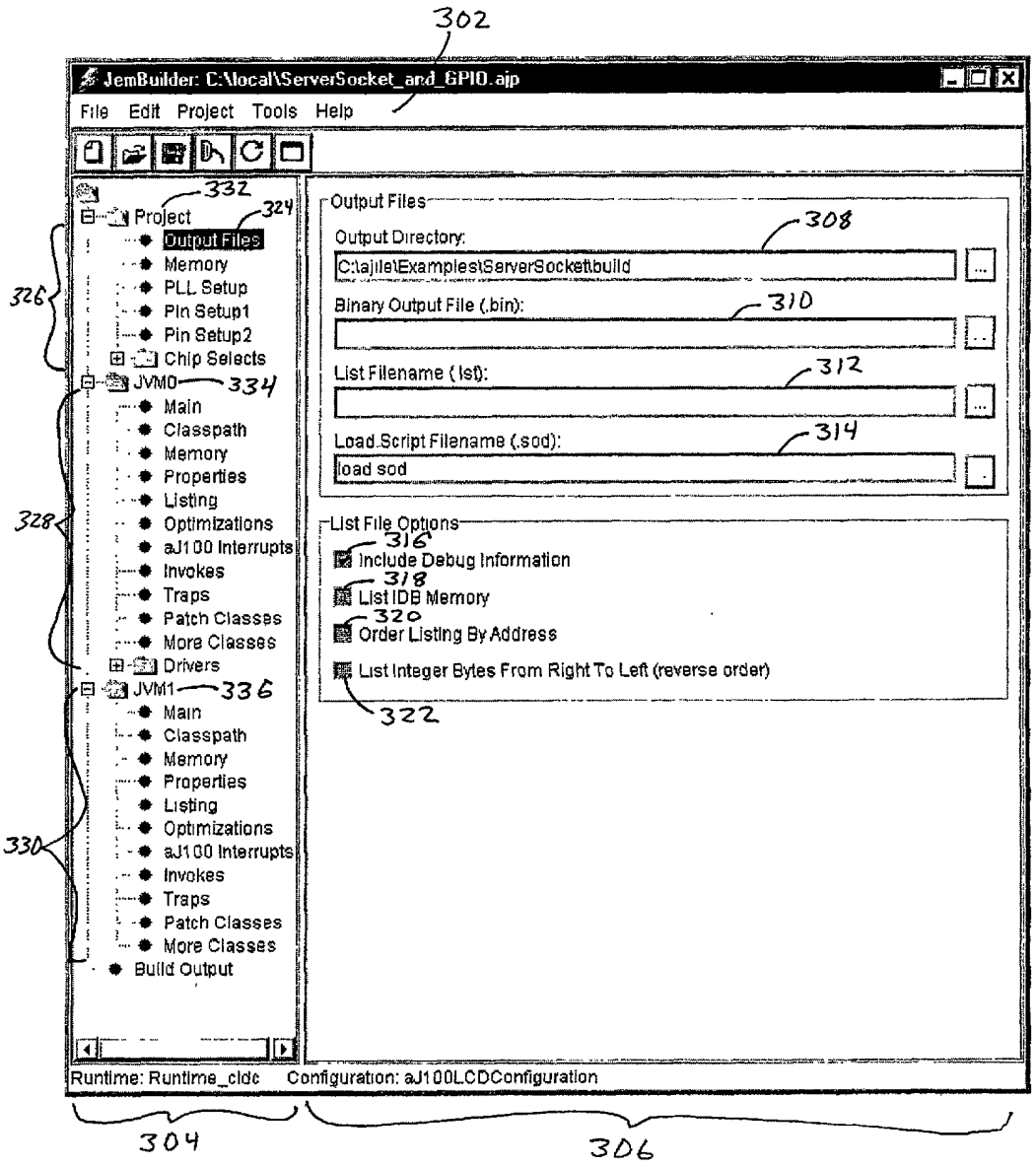

302
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
332
Project
324
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
326
JVM0
334
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
328
Drivers
JVM1
336
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
330
Build Output
Output Files
Output Directory:
308
C:\ajile\Examples\ServerSocket\build
Binary Output File (.bin):
310
List Filename (.lst):
312
Load Script Filename (.scd):
314
load scd
List File Options
316
Include Debug Information
318
List IDB Memory
320
Order Listing By Address
List Integer Bytes From Right To Left (reverse order)
322
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration
304
306

Fig. 3

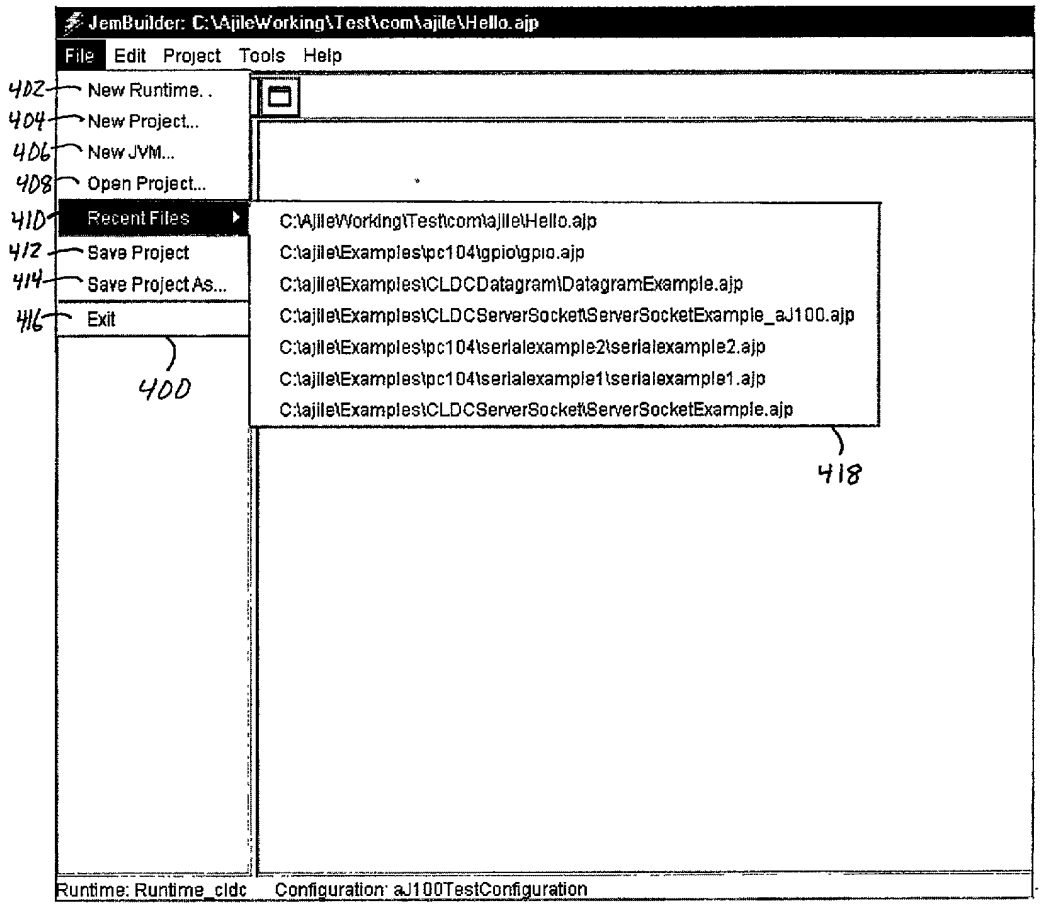

JemBuilder: C:\AjileWorking\Test\com\ajile\Hello.ajp
File Edit Project Tools Help
402 New Runtime. .
404 New Project...
406 New JVM...
408 Open Project...
410 Recent Files
412 Save Project
414 Save Project As...
416 Exit
400
C:\AjileWorking\Test\com\ajile\Hello.ajp
C:\ajile\Examples\pc104\gpio\gpio.ajp
C:\ajile\Examples\CLDCDatagram\DatagramExample.ajp
C:\ajile\Examples\CLDCServerSocket\ServerSocketExample_aJ100.ajp
C:\ajile\Examples\pc104\serialexample2\serialexample2.ajp
C:\ajile\Examples\pc104\serialexample1\serialexample1.ajp
C:\ajile\Examples\CLDCServerSocket\ServerSocketExample.ajp
418
Runtime: Runtime_cldc Configuration: aJ100TestConfiguration

Fig. 4

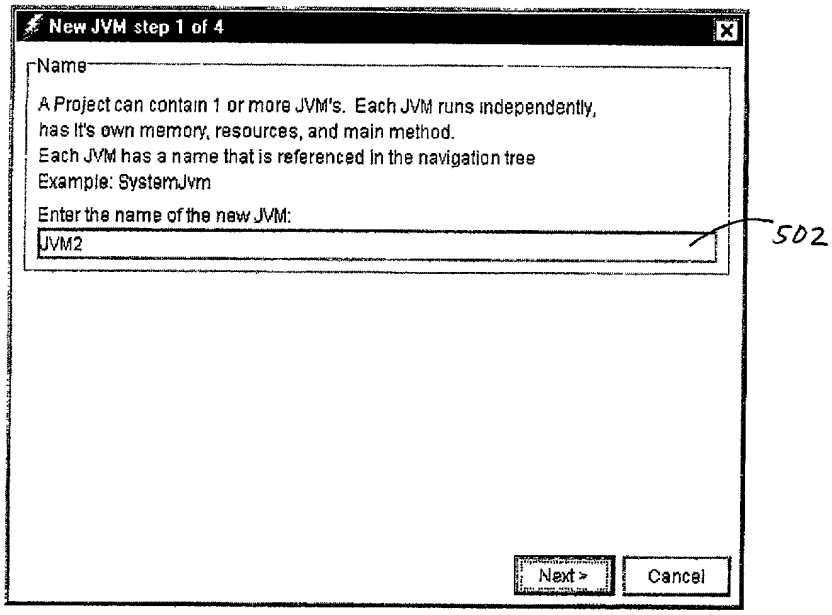

New JVM step 1 of 4
Name
A Project can contain 1 or more JVM's. Each JVM runs independently, has it's own memory, resources, and main method.
Each JVM has a name that is referenced in the navigation tree
Example: SystemJvm
Enter the name of the new JVM:
JVM2
Next >
Cancel
502
500

Fig. 5

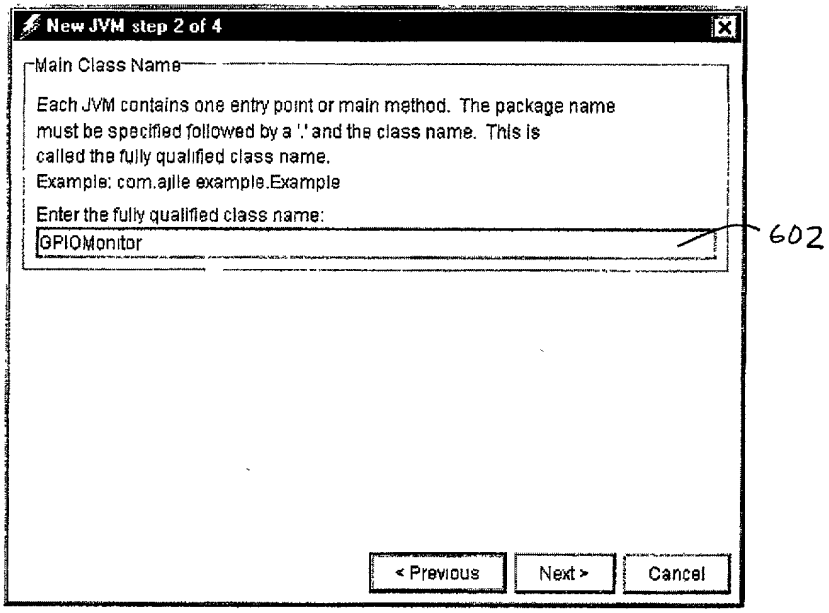

New JVM step 2 of 4
Main Class Name
Each JVM contains one entry point or main method. The package name must be specified followed by a '.' and the class name. This is called the fully qualified class name.
Example: com.ajile example.Example
Enter the fully qualified class name:
GPIOMonitor
602
< Previous
Next >
Cancel
600

Fig. 6

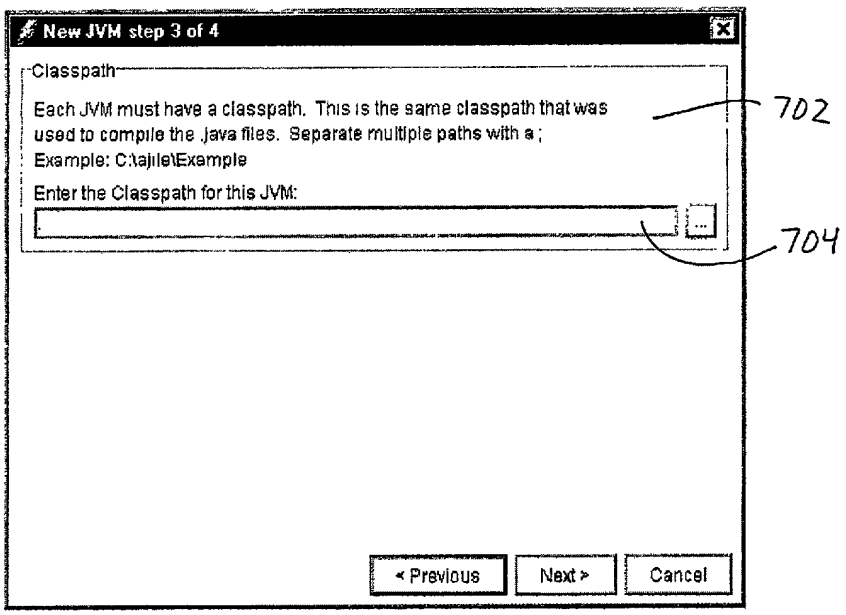

New JVM step 3 of 4
Classpath
Each JVM must have a classpath. This is the same classpath that was used to compile the Java files. Separate multiple paths with a ;
Example: C:\tajile\Example
Enter the Classpath for this JVM:
...
< Previous
Next >
Cancel
702
704
700

Fig. 7

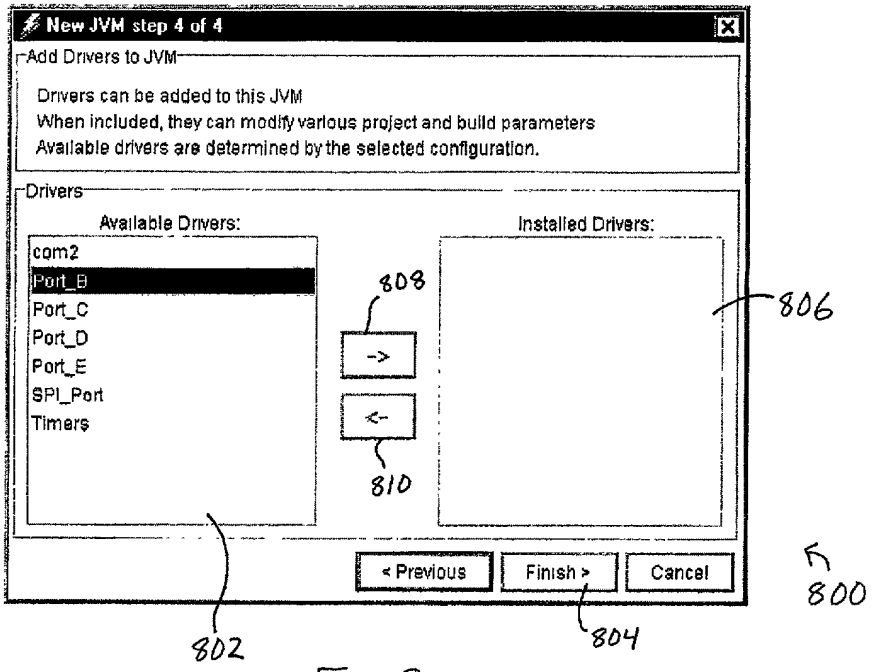

New JVM step 4 of 4
Add Drivers to JVM
Drivers can be added to this JVM
When included, they can modify various project and build parameters
Available drivers are determined by the selected configuration.
Drivers
Available Drivers:
com2
Port_B
Port_C
Port_D
Port_E
SPI_Port
Timers
->
<-
Installed Drivers:
< Previous
Finish >
Cancel
802
804
806
808
810
800

Fig. 8

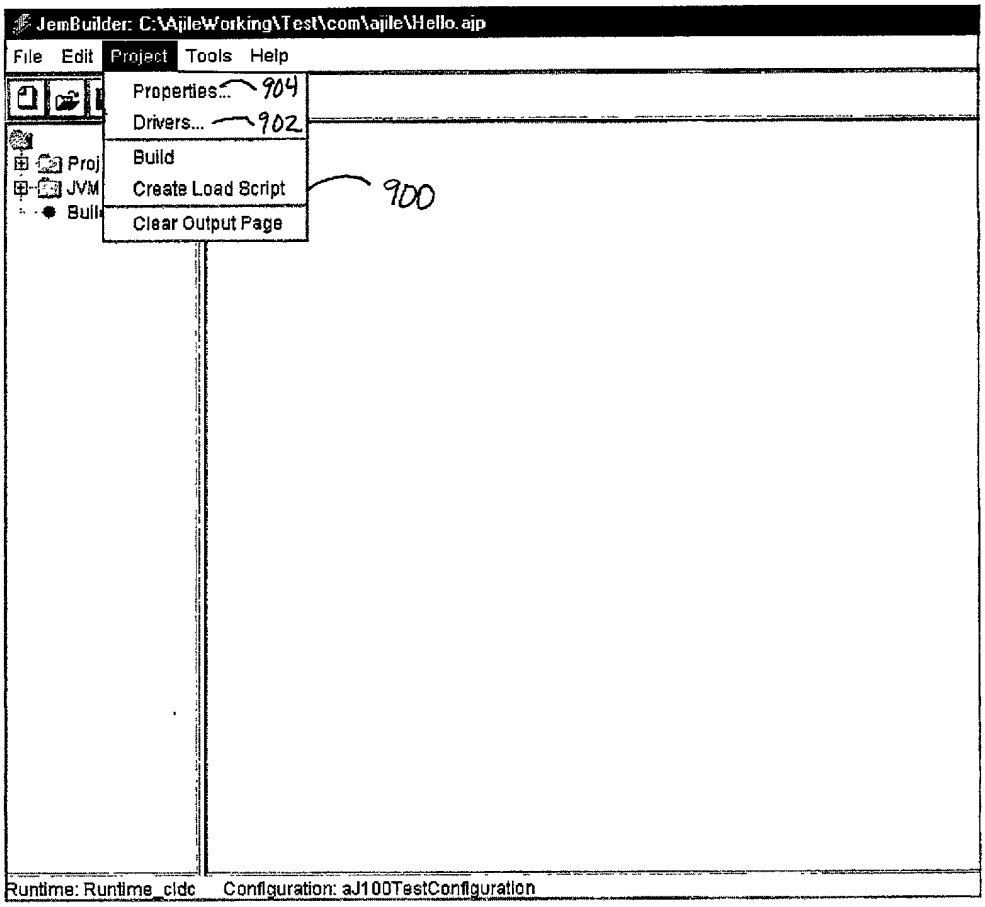

JemBuilder: C:\AjileWorking\Test\com\ajile\Hello.ajp
File Edit Project Tools Help
Properties...
Drivers...
Build
Create Load Script
Clear Output Page
904
902
900
Runtime: Runtime_cldc
Configuration: aJ100TestConfiguration

Fig. 9

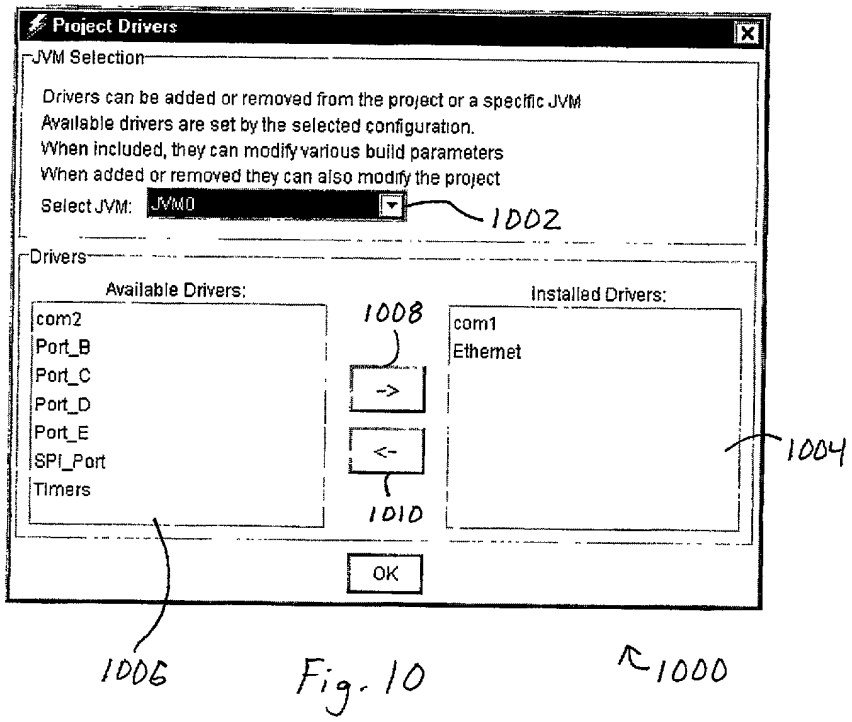

Project Drivers
JVM Selection
Drivers can be added or removed from the project or a specific JVM
Available drivers are set by the selected configuration.
When included, they can modify various build parameters
When added or removed they can also modify the project
Select JVM:
JVM0
1002
Drivers
Available Drivers:
com2
Port_B
Port_C
Port_D
Port_E
SPI_Port
Timers
1008
->
<-
1010
Installed Drivers:
com1
Ethernet
1004
OK
1006
1000

Fig. 10

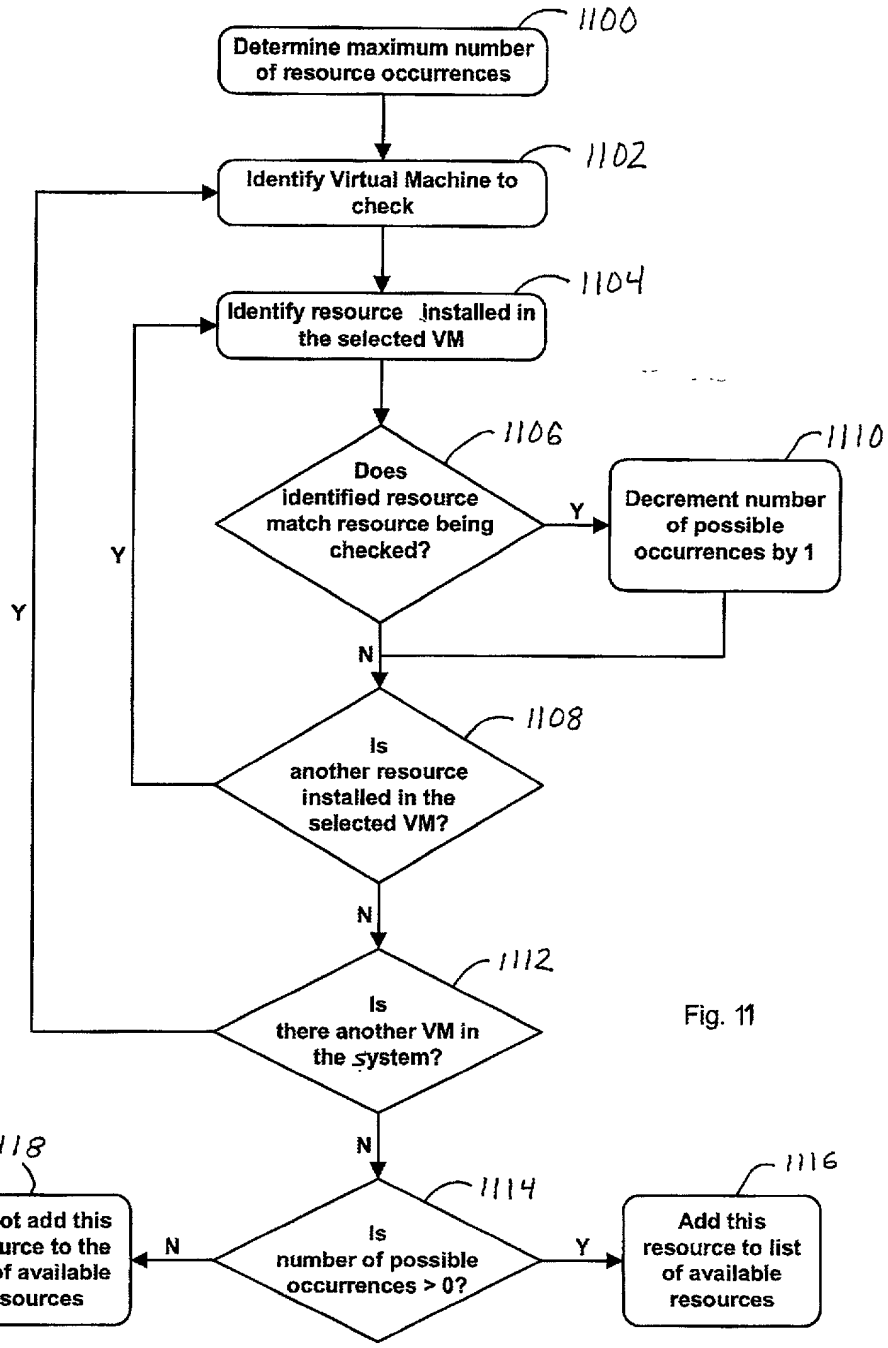

1100
Determine maximum number of resource occurrences
1102
Identify Virtual Machine to check
1104
Identify resource installed in the selected VM
1106
Does identified resource match resource being checked?
Y
1110
Decrement number of possible occurrences by 1
N
1108
Is another resource installed in the selected VM?
Y
N
1112
Is there another VM in the system?
Y
N
1114
Is number of possible occurrences > 0?
N
1118
Do not add this resource to the list of available resources
Y
1116
Add this resource to list of available resources

Fig. 11

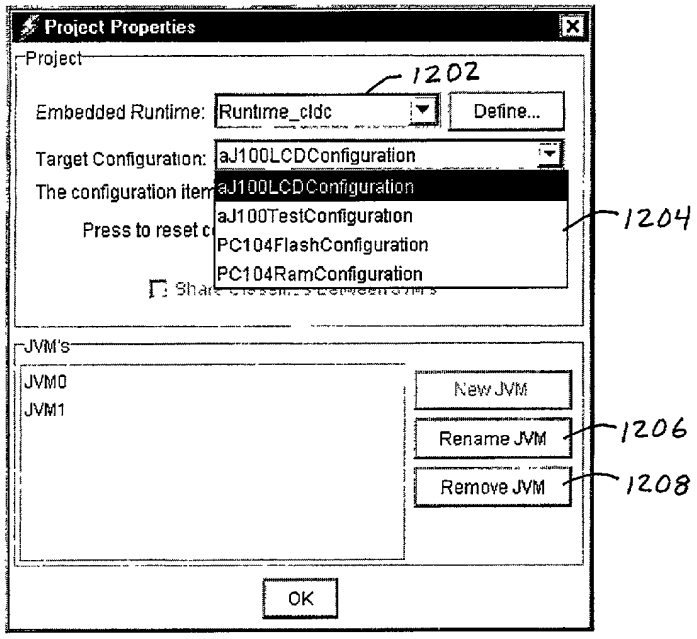

Project Properties
Project
1202
Embedded Runtime:
Runtime_cldc
Define...
Target Configuration:
aJ100LCDConfiguration
The configuration item
aJ100LCDConfiguration
aJ100TestConfiguration
PC104FlashConfiguration
PC104RamConfiguration
1204
Press to reset c
JVM's
JVM0
JVM1
New JVM
Rename JVM
1206
Remove JVM
1208
OK

Fig. 12

1200

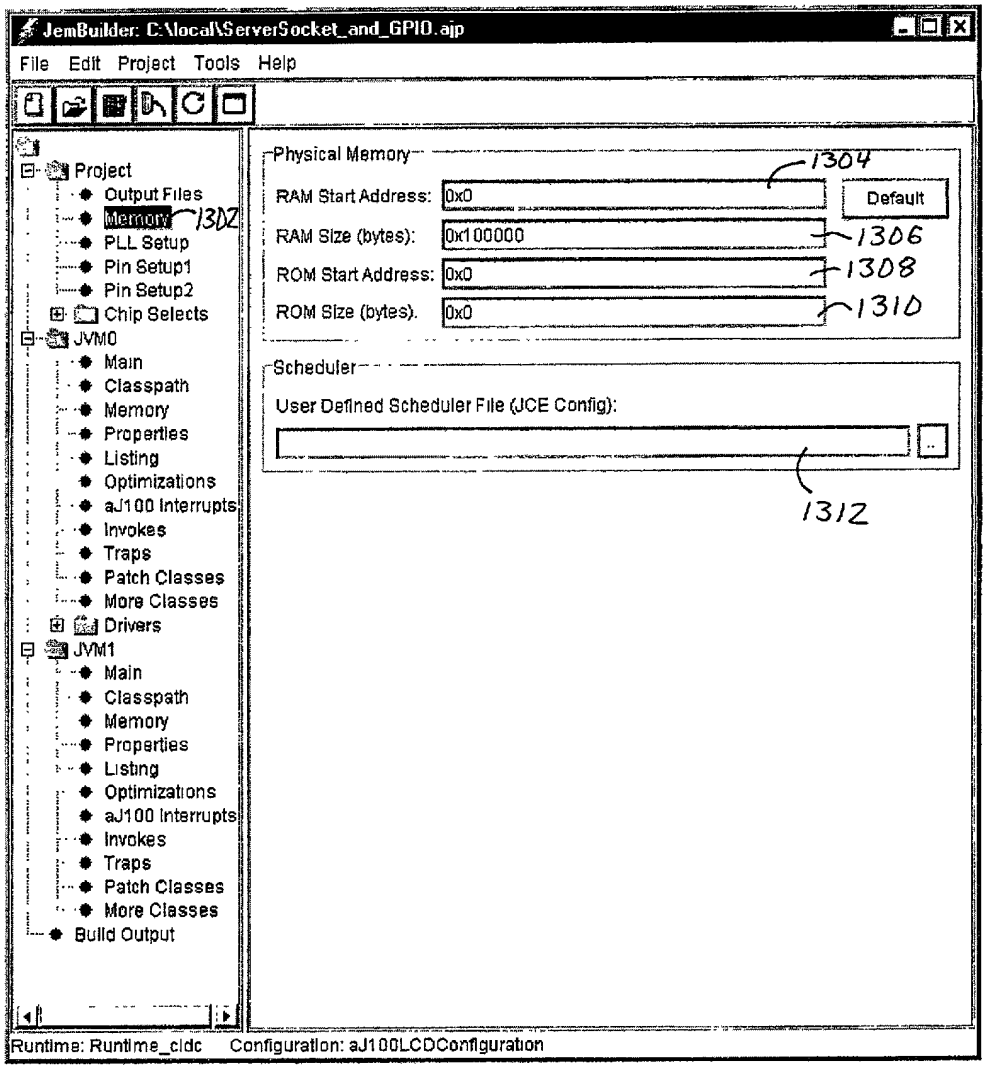

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Physical Memory
RAM Start Address: 0x0
Default
RAM Size (bytes): 0x100000
ROM Start Address: 0x0
ROM Size (bytes). 0x0
Scheduler
User Defined Scheduler File (JCE Config):
1304
1302
1306
1308
1310
1312
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration
1300

Fig. 13

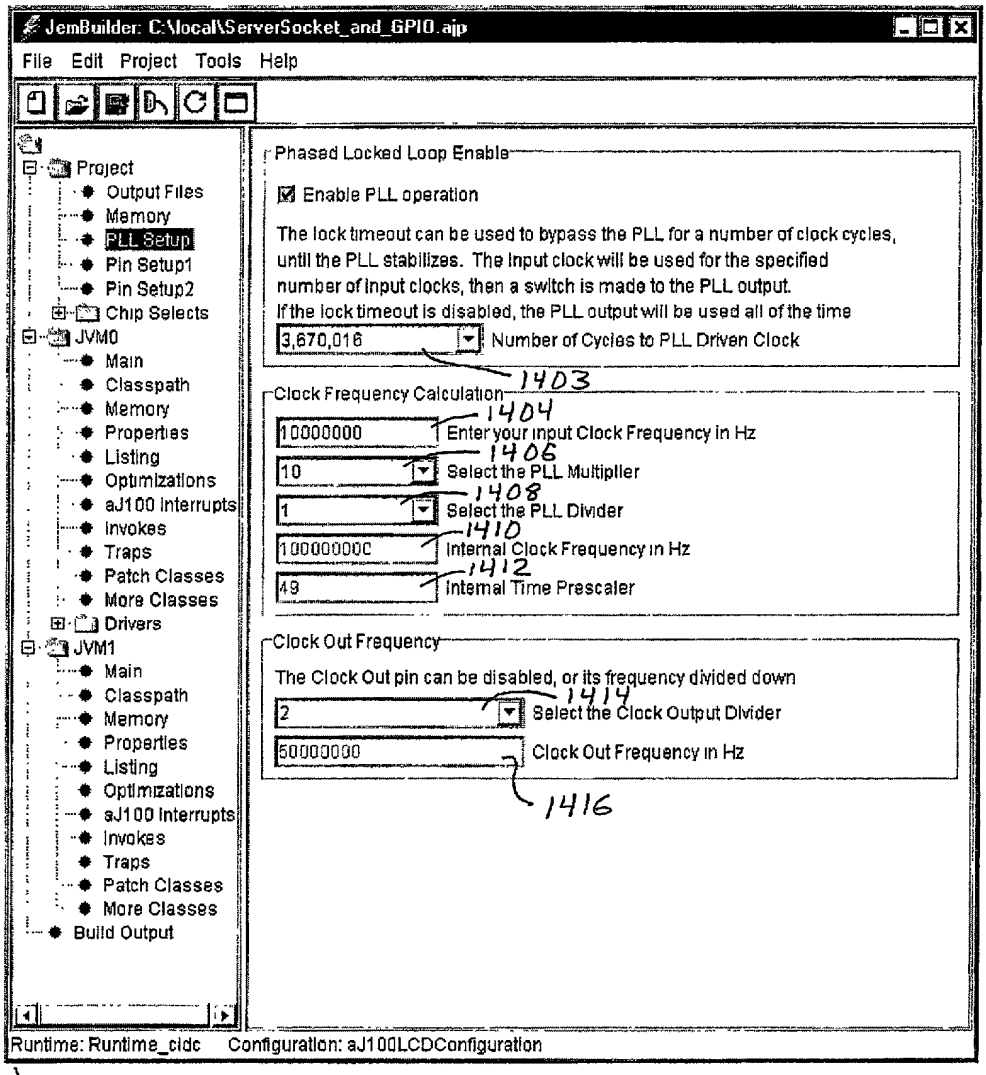

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Phased Locked Loop Enable
Enable PLL operation
The lock timeout can be used to bypass the PLL for a number of clock cycles, until the PLL stabilizes. The input clock will be used for the specified number of input clocks, then a switch is made to the PLL output.
If the lock timeout is disabled, the PLL output will be used all of the time
3,670,016
Number of Cycles to PLL Driven Clock
1403
Clock Frequency Calculation
10000000
Enter your input Clock Frequency in Hz
1404
10
Select the PLL Multiplier
1406
1
Select the PLL Divider
1408
100000000
Internal Clock Frequency in Hz
1410
49
Internal Time Prescaler
1412
Clock Out Frequency
The Clock Out pin can be disabled, or its frequency divided down
2
Select the Clock Output Divider
1414
50000000
Clock Out Frequency in Hz
1416
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration
1402
1400

Fig. 14

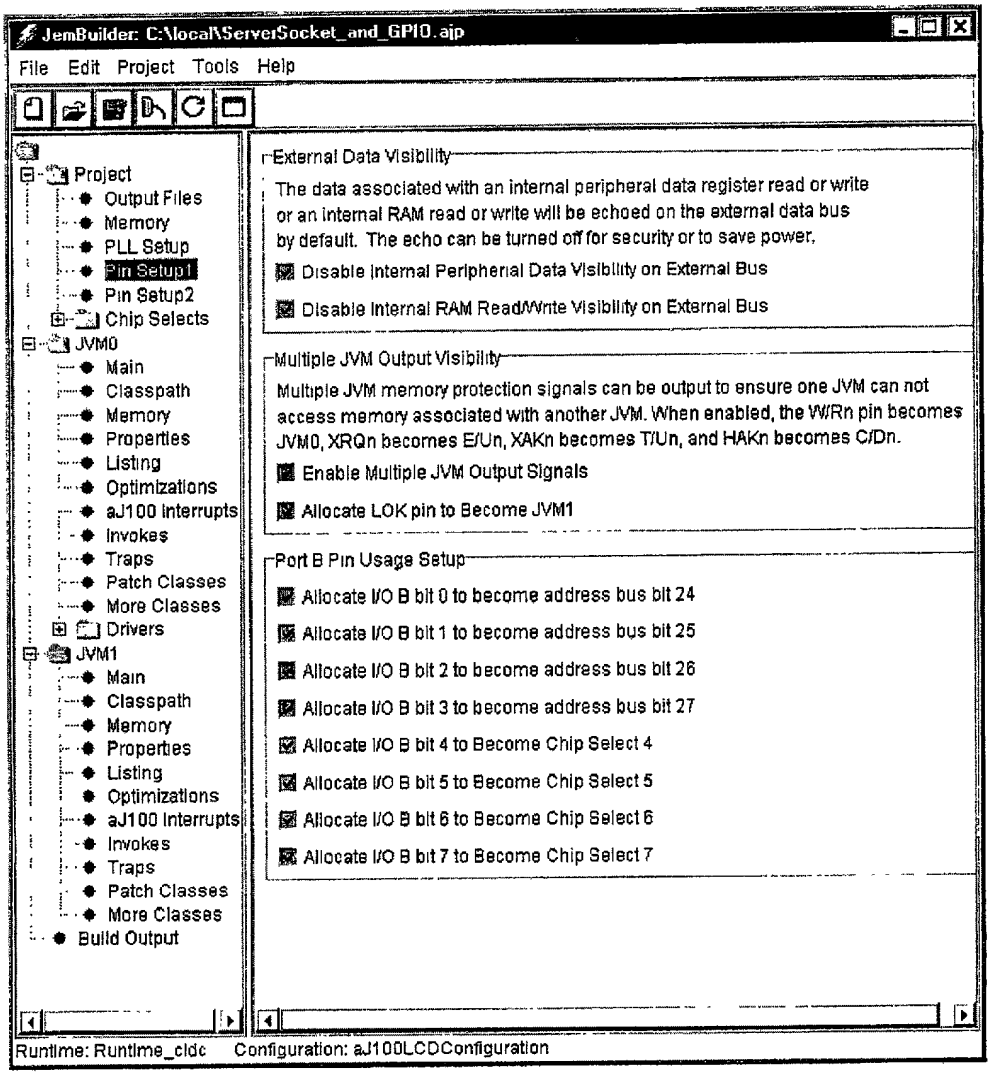

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
External Data Visibility
The data associated with an internal peripheral data register read or write or an internal RAM read or write will be echoed on the external data bus by default. The echo can be turned off for security or to save power.
Disable Internal Peripheral Data Visibility on External Bus
Disable Internal RAM Read/Write Visibility on External Bus
Multiple JVM Output Visibility
Multiple JVM memory protection signals can be output to ensure one JVM can not access memory associated with another JVM. When enabled, the W/Rn pin becomes JVM0, XRQn becomes E/Un, XAKn becomes T/Un, and HAKn becomes C/Dn.
Enable Multiple JVM Output Signals
Allocate LOK pin to Become JVM1
Port B Pin Usage Setup
Allocate I/O B bit 0 to become address bus bit 24
Allocate I/O B bit 1 to become address bus bit 25
Allocate I/O B bit 2 to become address bus bit 26
Allocate I/O B bit 3 to become address bus bit 27
Allocate I/O B bit 4 to Become Chip Select 4
Allocate I/O B bit 5 to Become Chip Select 5
Allocate I/O B bit 6 to Become Chip Select 6
Allocate I/O B bit 7 to Become Chip Select 7
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 15

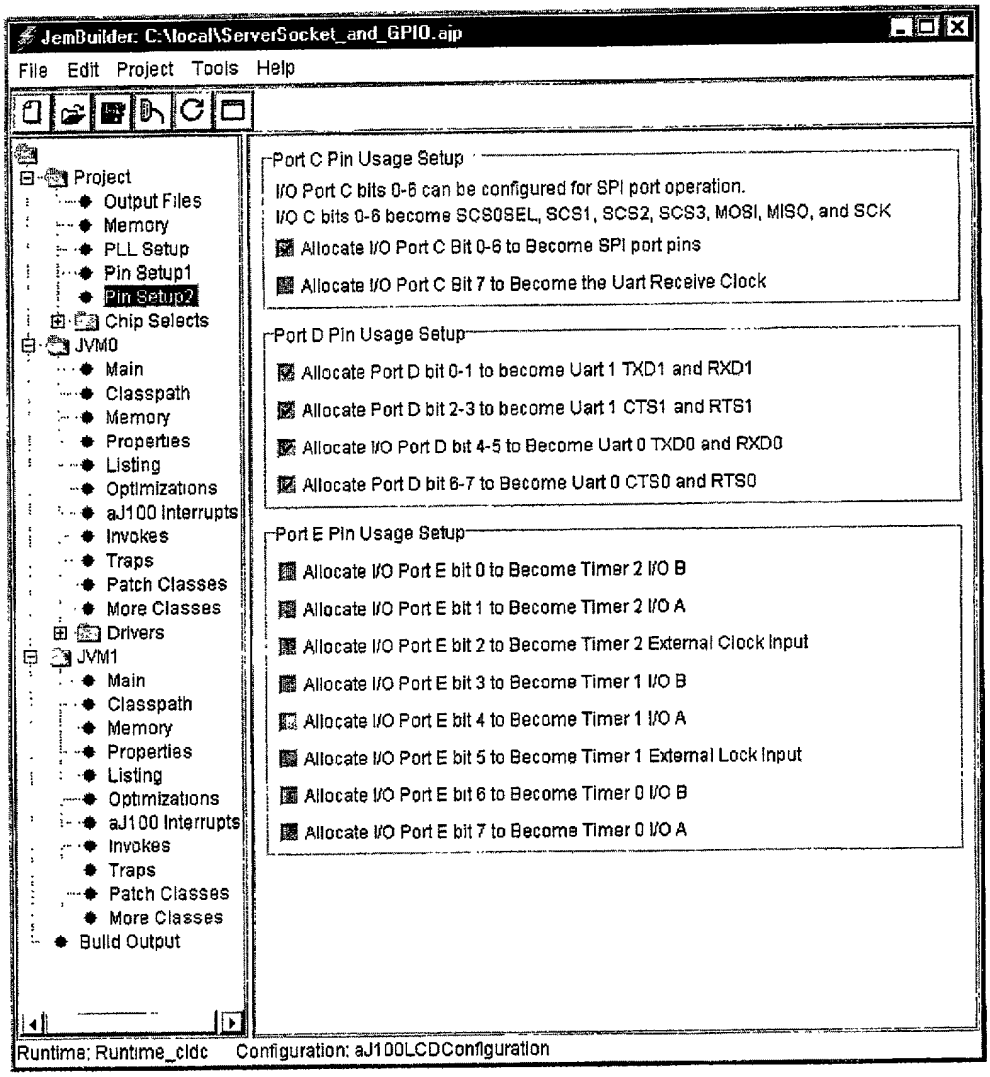

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Port C Pin Usage Setup
I/O Port C bits 0-6 can be configured for SPI port operation.
I/O C bits 0-6 become SCS0SEL, SCS1, SCS2, SCS3, MOSI, MISO, and SCK
Allocate I/O Port C Bit 0-6 to Become SPI port pins
Allocate I/O Port C Bit 7 to Become the Uart Receive Clock
Port D Pin Usage Setup
Allocate Port D bit 0-1 to become Uart 1 TXD1 and RXD1
Allocate Port D bit 2-3 to become Uart 1 CTS1 and RTS1
Allocate I/O Port D bit 4-5 to Become Uart 0 TXD0 and RXD0
Allocate Port D bit 6-7 to Become Uart 0 CTS0 and RTS0
Port E Pin Usage Setup
Allocate I/O Port E bit 0 to Become Timer 2 I/O B
Allocate I/O Port E bit 1 to Become Timer 2 I/O A
Allocate I/O Port E bit 2 to Become Timer 2 External Clock Input
Allocate I/O Port E bit 3 to Become Timer 1 I/O B
Allocate I/O Port E bit 4 to Become Timer 1 I/O A
Allocate I/O Port E bit 5 to Become Timer 1 External Lock Input
Allocate I/O Port E bit 6 to Become Timer 0 I/O B
Allocate I/O Port E bit 7 to Become Timer 0 I/O A
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 16

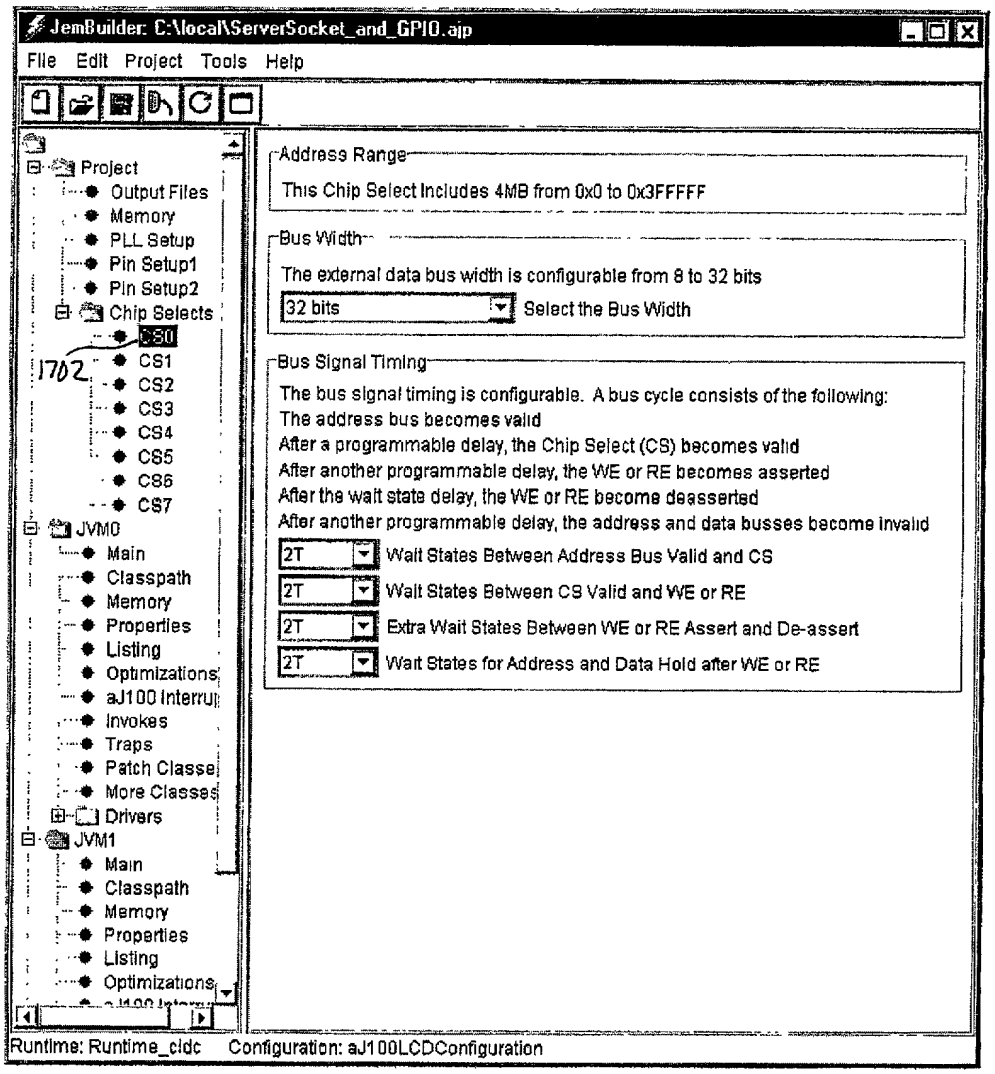

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
CS0
CS1
CS2
CS3
CS4
CS5
CS6
CS7
1702
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interru
Invokes
Traps
Patch Classe
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
Address Range
This Chip Select includes 4MB from 0x0 to 0x3FFFFF
Bus Width
The external data bus width is configurable from 8 to 32 bits
32 bits
Select the Bus Width
Bus Signal Timing
The bus signal timing is configurable. A bus cycle consists of the following:
The address bus becomes valid
After a programmable delay, the Chip Select (CS) becomes valid
After another programmable delay, the WE or RE becomes asserted
After the wait state delay, the WE or RE become deasserted
After another programmable delay, the address and data busses become invalid
2T
Wait States Between Address Bus Valid and CS
2T
Wait States Between CS Valid and WE or RE
2T
Extra Wait States Between WE or RE Assert and De-assert
2T
Wait States for Address and Data Hold after WE or RE
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 17

1700

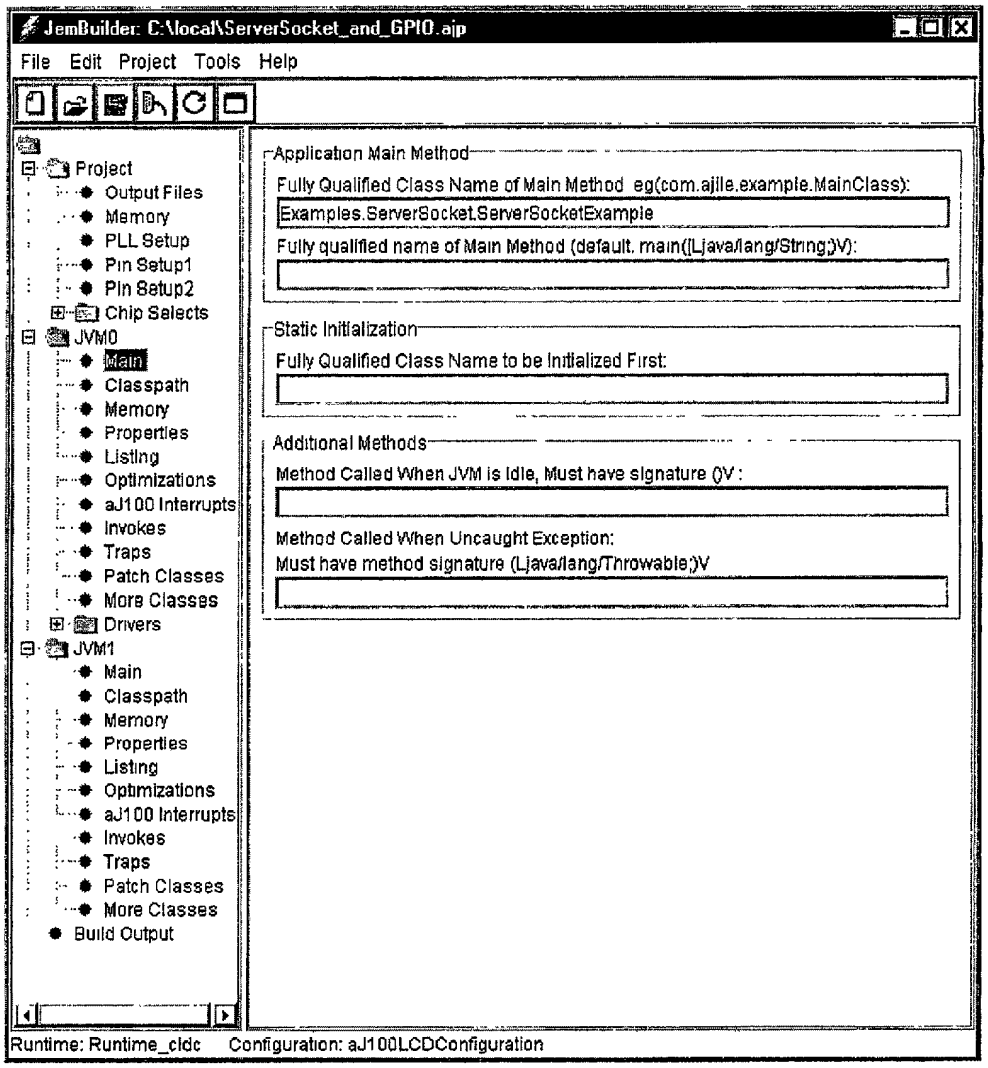

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Application Main Method
Fully Qualified Class Name of Main Method eg(com.ajile.example.MainClass):
Examples.ServerSocket.ServerSocketExample
Fully qualified name of Main Method (default. main([Ljava/lang/String;)V):
Static Initialization
Fully Qualified Class Name to be Initialized First:
Additional Methods
Method Called When JVM is Idle, Must have signature ()V :
Method Called When Uncaught Exception:
Must have method signature (Ljava/lang/Throwable;)V
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 18

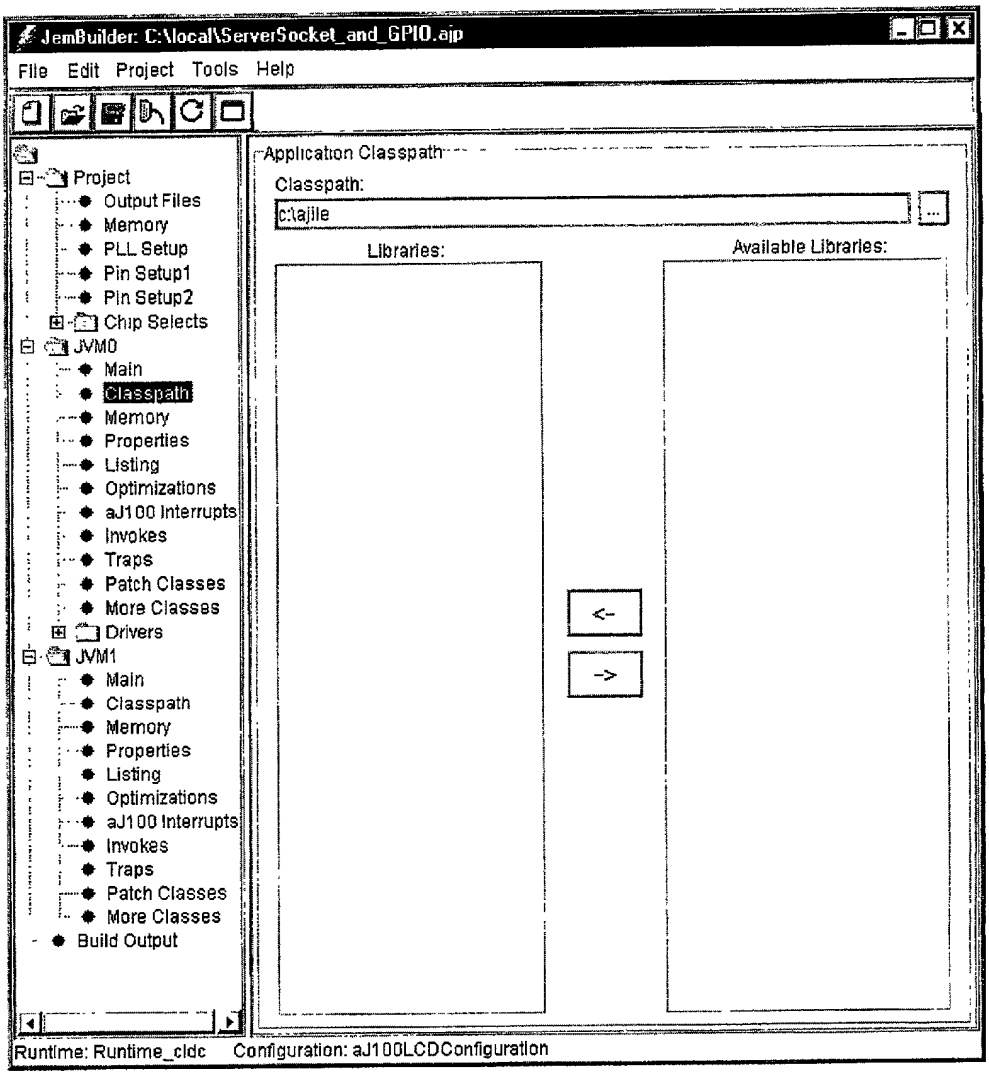

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Application Classpath
Classpath:
c:\ajile
Libraries:
Available Libraries:
<-
->
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 19

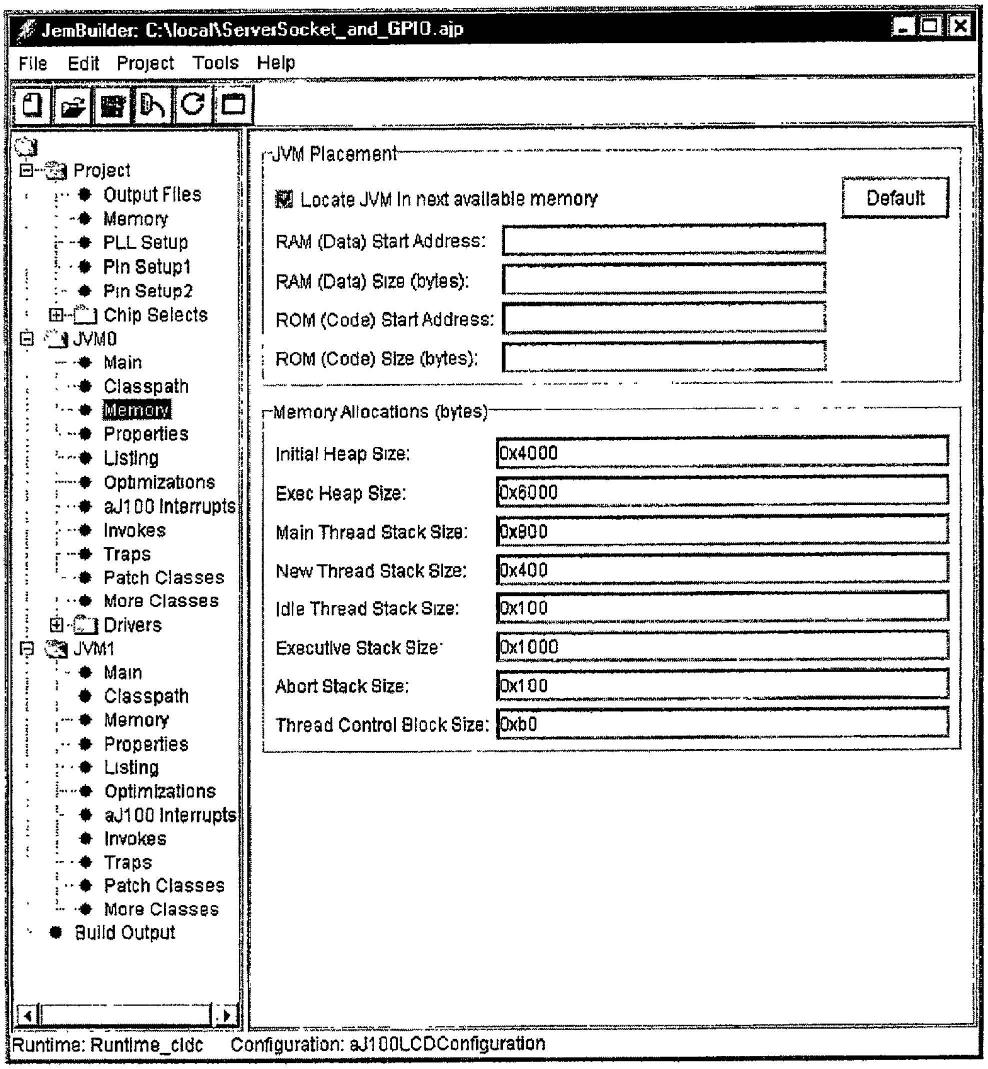

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
JVM Placement
Locate JVM in next available memory
Default
RAM (Data) Start Address:
RAM (Data) Size (bytes):
ROM (Code) Start Address:
ROM (Code) Size (bytes):
Memory Allocations (bytes)
Initial Heap Size: 0x4000
Exec Heap Size: 0x6000
Main Thread Stack Size: 0x800
New Thread Stack Size: 0x400
Idle Thread Stack Size: 0x100
Executive Stack Size: 0x1000
Abort Stack Size: 0x100
Thread Control Block Size: 0xb0
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 20

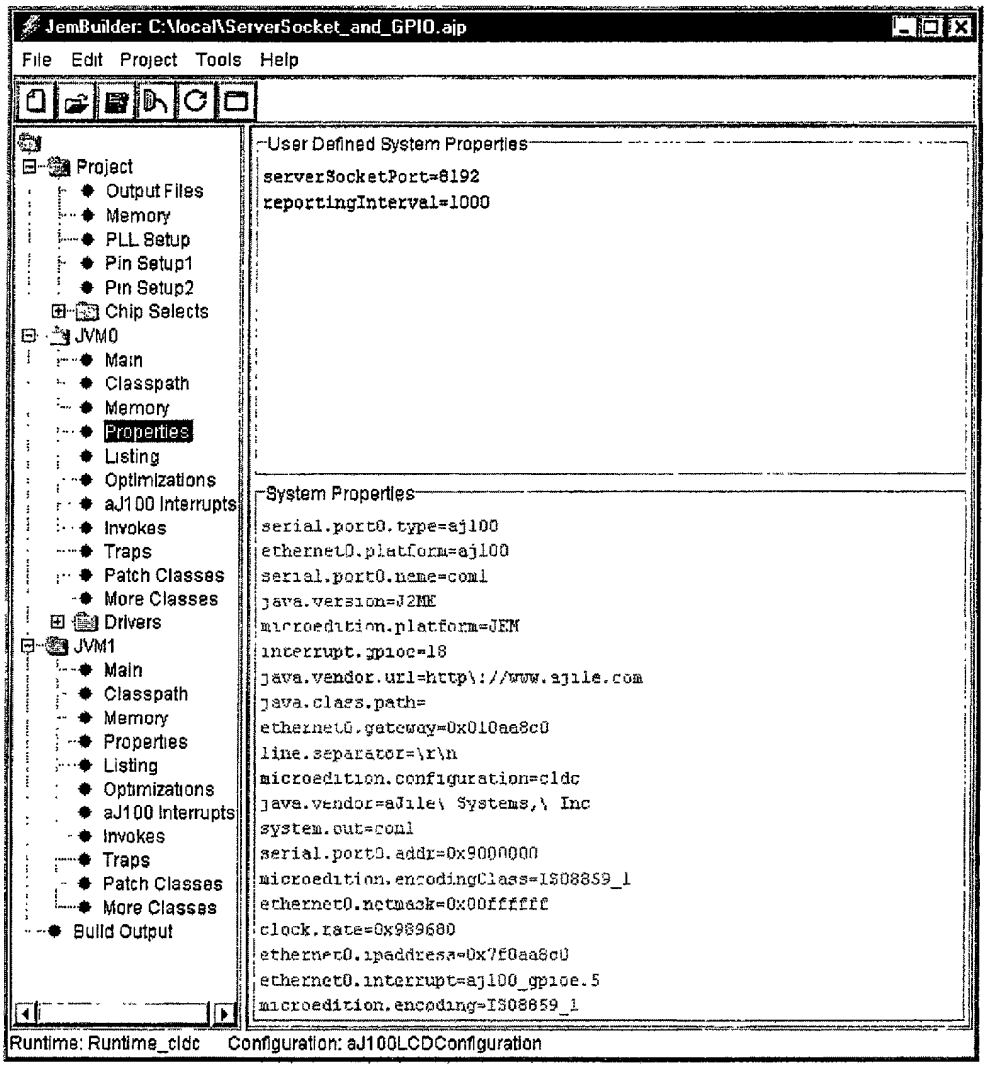

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
User Defined System Properties
serverSocketPort=8192
reportingInterval=1000
System Properties
serial.port0.type=aj100
ethernet0.platform=aj100
serial.port0.name=com1
java.version=J2ME
microedition.platform=JEM
interrupt.gpioc=18
java.vendor.url=http\://www.ajile.com
java.class.path=
ethernet0.gateway=0x010aa8c0
line.separator=\r\n
microedition.configuration=cldc
java.vendor=aJile\ Systems,\ Inc
system.out=com1
serial.port0.addr=0x9000000
microedition.encodingClass=IS08859_1
ethernet0.netmask=0x00ffffff
clock.rate=0x989680
ethernet0.ipaddress=0x7f0aa8c0
ethernet0.interrupt=aj100_gpioe.5
microedition.encoding=IS08859_1
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 21

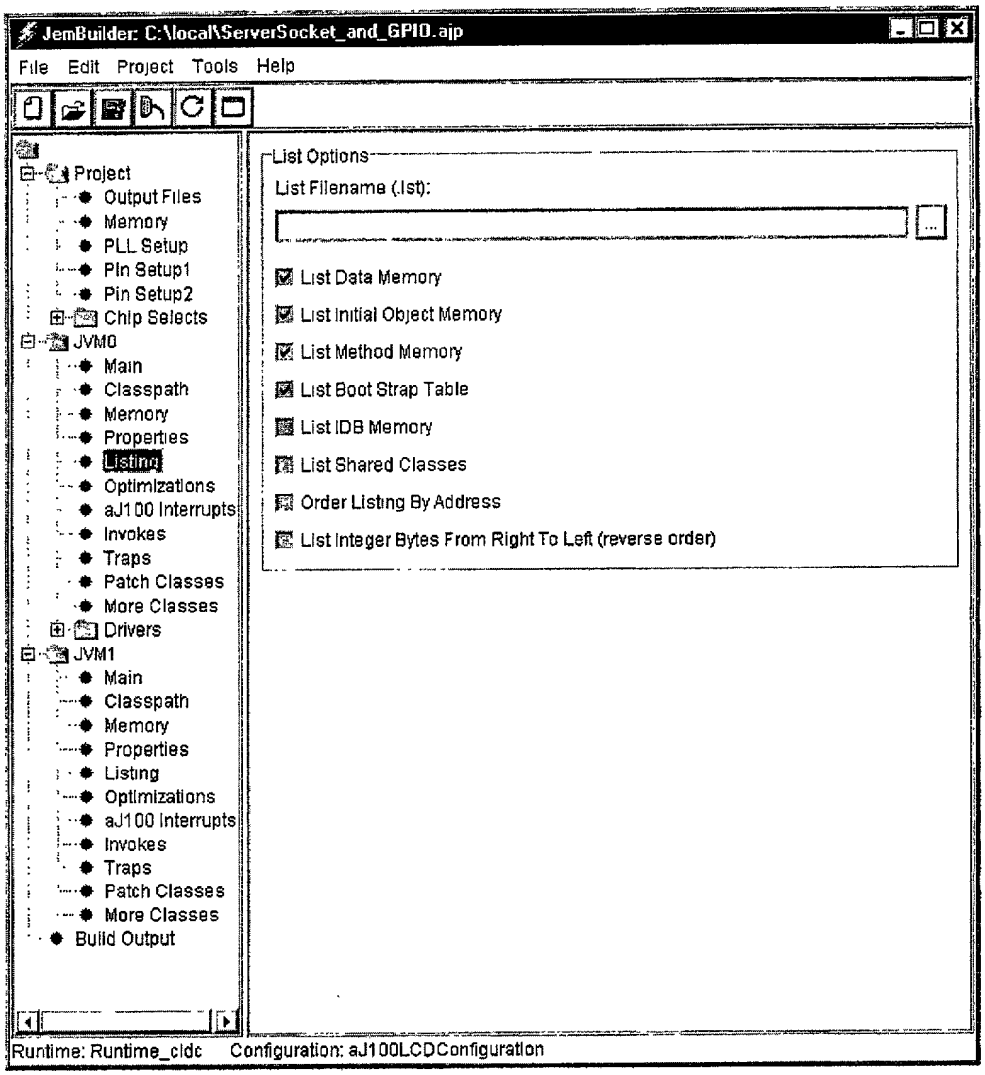
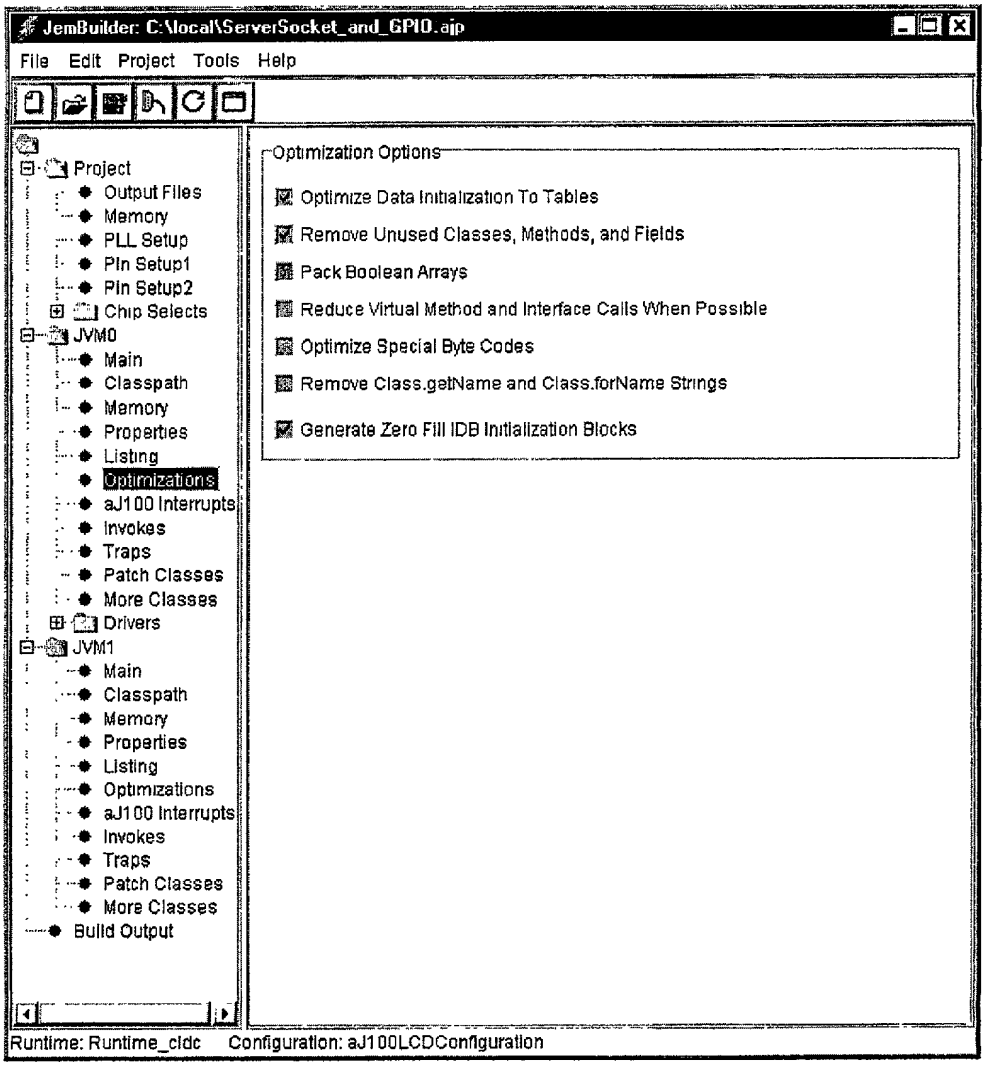

JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
List Options
List Filename (.lst):
List Data Memory
List Initial Object Memory
List Method Memory
List Boot Strap Table
List IDB Memory
List Shared Classes
Order Listing By Address
List Integer Bytes From Right To Left (reverse order)
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 22


JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
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Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Optimization Options
Optimize Data Initialization To Tables
Remove Unused Classes, Methods, and Fields
Pack Boolean Arrays
Reduce Virtual Method and Interface Calls When Possible
Optimize Special Byte Codes
Remove Class.getName and Class.forName Strings
Generate Zero Fill IDB Initialization Blocks
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 23

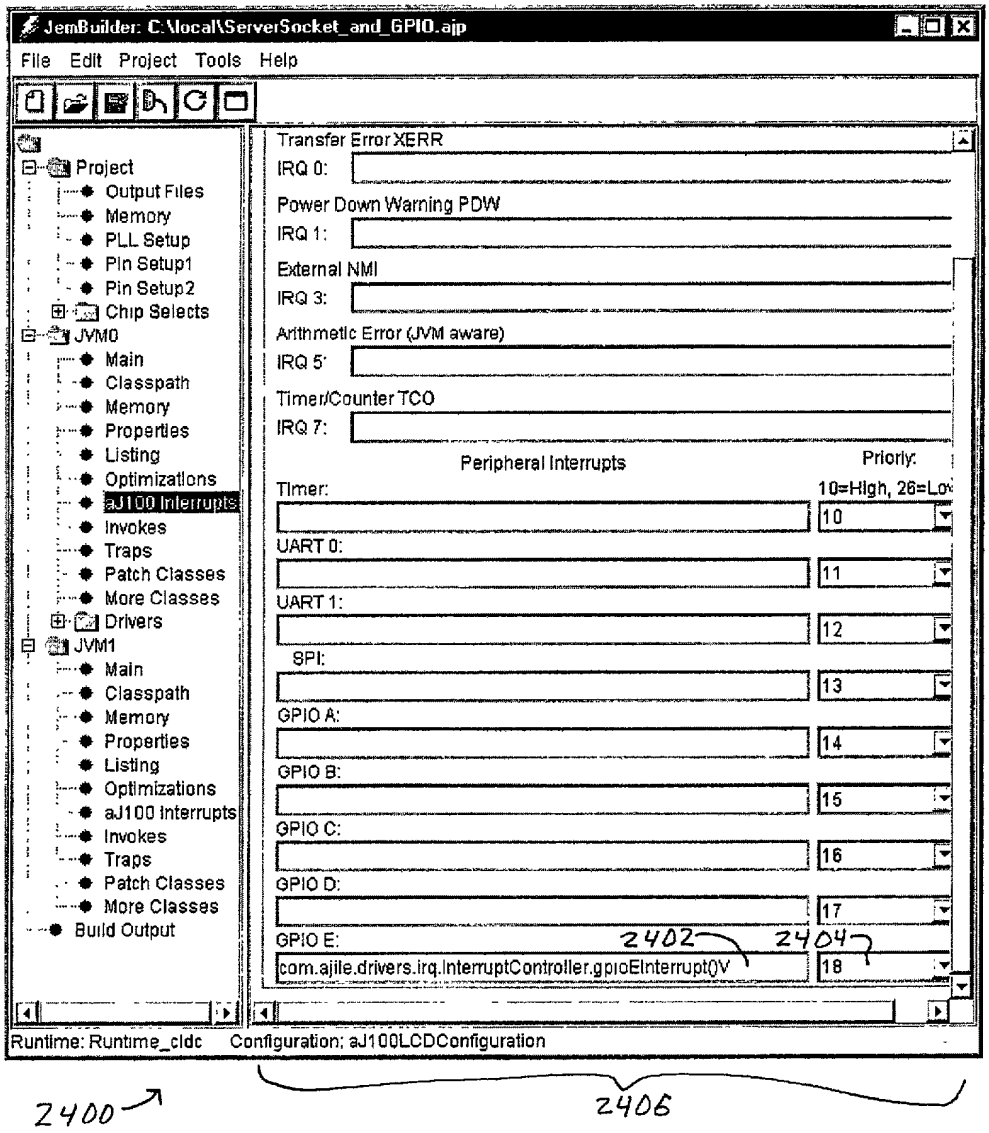
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Transfer Error XERR
IRQ 0:
Power Down Warning PDW
IRQ 1:
External NMI
IRQ 3:
Arithmetic Error (JVM aware)
IRQ 5:
Timer/Counter TCO
IRQ 7:
Peripheral Interrupts
Priority:
10=High, 26=Lo
Timer:
10
UART 0:
11
UART 1:
12
SPI:
13
GPIO A:
14
GPIO B:
15
GPIO C:
16
GPIO D:
17
GPIO E:
2402
2404
com.ajile.drivers.irq.InterruptController.gpioEInterrupt()V
18
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration
2400
2406

Fig. 24

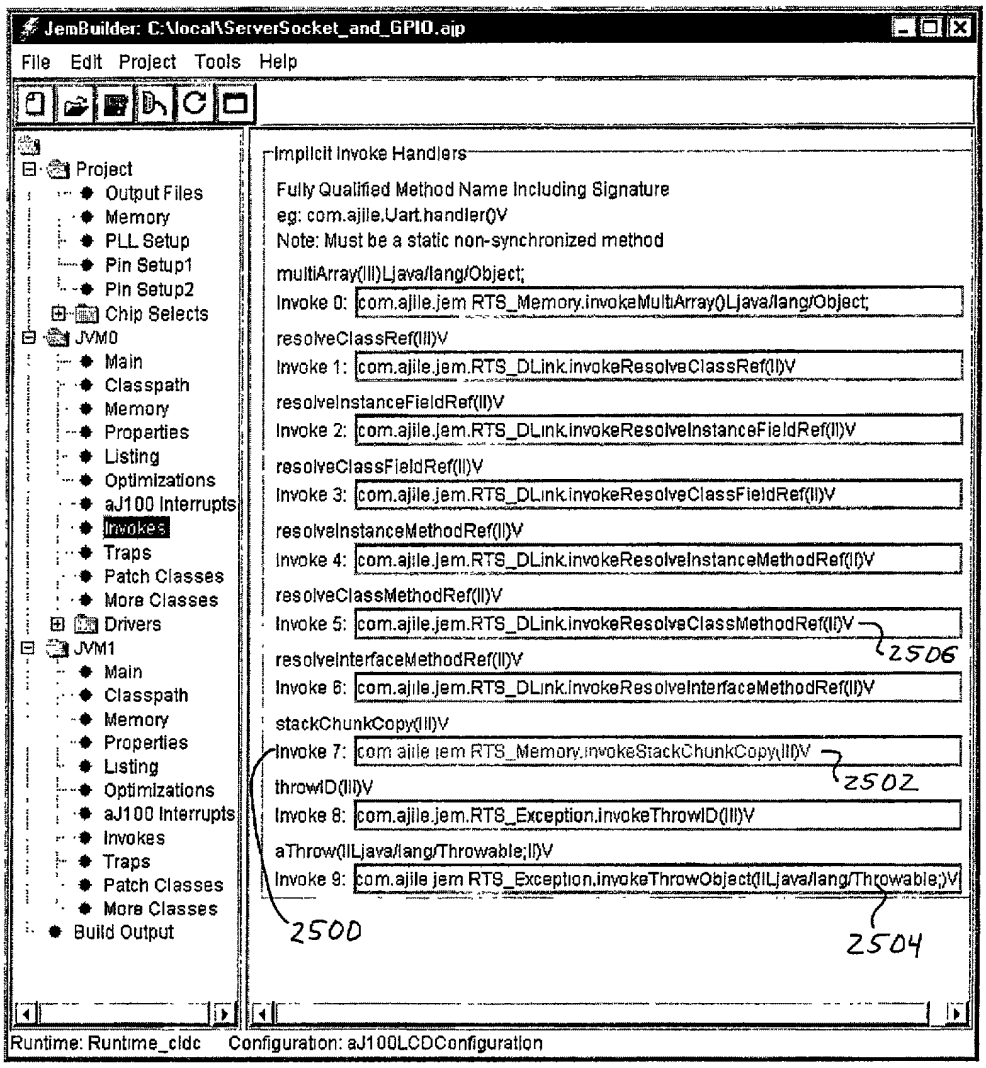
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Implicit Invoke Handlers
Fully Qualified Method Name Including Signature
eg: com.ajile.Uart.handler()V
Note: Must be a static non-synchronized method
multiArray(II)Ljava/lang/Object;
Invoke 0: com.ajile.jem.RTS_Memory.invokeMultiArray()Ljava/lang/Object;
resolveClassRef(II)V
Invoke 1: com.ajile.jem.RTS_DLink.invokeResolveClassRef(II)V
resolveInstanceFieldRef(II)V
Invoke 2: com.ajile.jem.RTS_DLink.invokeResolveInstanceFieldRef(II)V
resolveClassFieldRef(II)V
Invoke 3: com.ajile.jem.RTS_DLink.invokeResolveClassFieldRef(II)V
resolveInstanceMethodRef(II)V
Invoke 4: com.ajile.jem.RTS_DLink.invokeResolveInstanceMethodRef(II)V
resolveClassMethodRef(II)V
Invoke 5: com.ajile.jem.RTS_DLink.invokeResolveClassMethodRef(II)V
2506
resolveInterfaceMethodRef(II)V
Invoke 6: com.ajile.jem.RTS_DLink.invokeResolveInterfaceMethodRef(II)V
stackChunkCopy(III)V
Invoke 7: com.ajile.jem.RTS_Memory.invokeStackChunkCopy(III)V
2502
throwID(III)V
Invoke 8: com.ajile.jem.RTS_Exception.invokeThrowID(III)V
aThrow(IILjava/lang/Throwable;II)V
Invoke 9: com.ajile.jem.RTS_Exception.invokeThrowObject(IILjava/lang/Throwable;)V
2500
2504
Runtime: Runtime_cldc Configuration: aJ100LCDConfiguration

Fig. 25

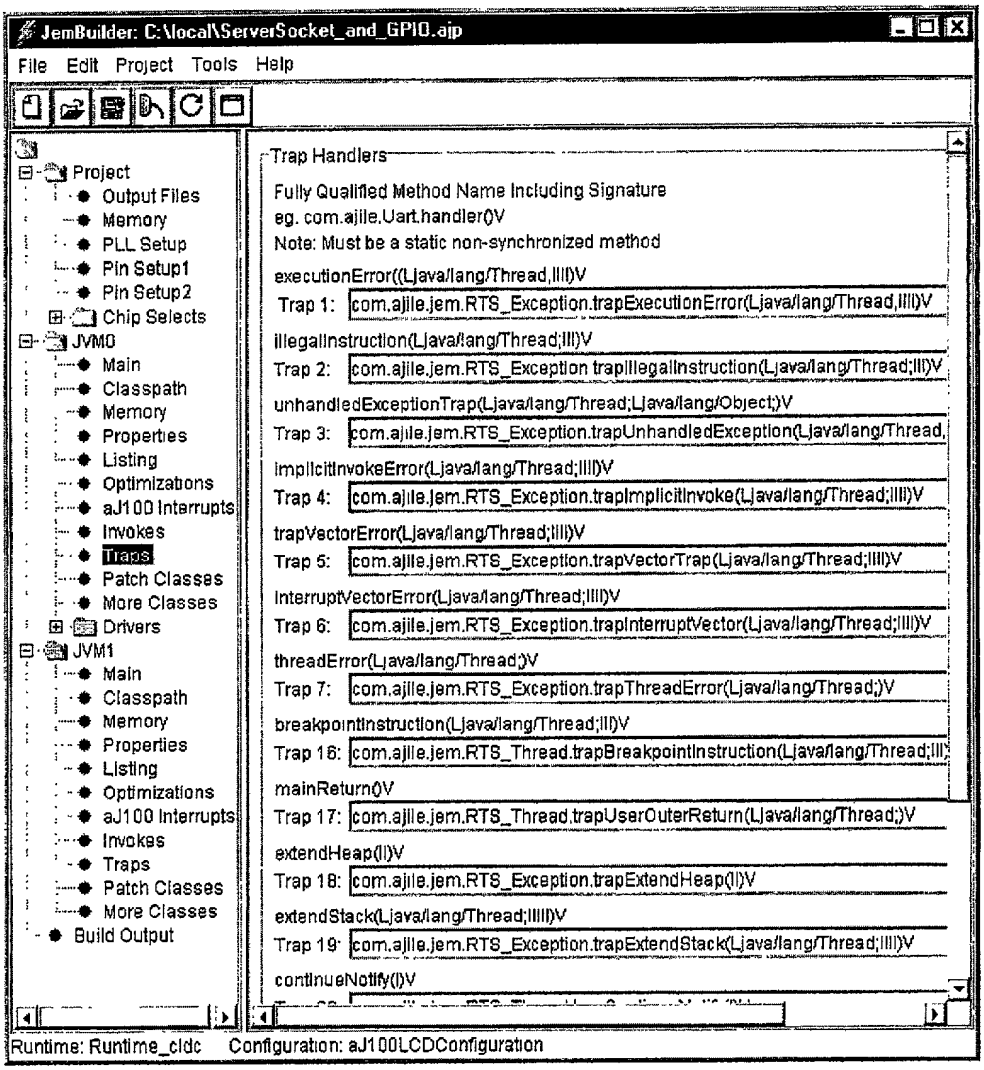
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Trap Handlers
Fully Qualified Method Name Including Signature
eg. com.ajile.Uart.handler()V
Note: Must be a static non-synchronized method
executionError(Ljava/lang/Thread;III)V
Trap 1: com.ajile.jem.RTS_Exception.trapExecutionError(Ljava/lang/Thread;III)V
illegalInstruction(Ljava/lang/Thread;II)V
Trap 2: com.ajile.jem.RTS_Exception trapIllegalInstruction(Ljava/lang/Thread;II)V
unhandledExceptionTrap(Ljava/lang/Thread;Ljava/lang/Object;)V
Trap 3: com.ajile.jem.RTS_Exception.trapUnhandledException(Ljava/lang/Thread,
implicitInvokeError(Ljava/lang/Thread;III)V
Trap 4: com.ajile.jem.RTS_Exception.trapImplicitInvoke(Ljava/lang/Thread;III)V
trapVectorError(Ljava/lang/Thread;III)V
Trap 5: com.ajile.jem.RTS_Exception.trapVectorTrap(Ljava/lang/Thread;III)V
InterruptVectorError(Ljava/lang/Thread;III)V
Trap 6: com.ajile.jem.RTS_Exception.trapInterruptVector(Ljava/lang/Thread;III)V
threadError(Ljava/lang/Thread;)V
Trap 7: com.ajile.jem.RTS_Exception.trapThreadError(Ljava/lang/Thread;)V
breakpointInstruction(Ljava/lang/Thread;II)V
Trap 16: com.ajile.jem.RTS_Thread.trapBreakpointInstruction(Ljava/lang/Thread;II
mainReturn()V
Trap 17: com.ajile.jem.RTS_Thread.trapUserOuterReturn(Ljava/lang/Thread;)V
extendHeap(II)V
Trap 18: com.ajile.jem.RTS_Exception.trapExtendHeap(II)V
extendStack(Ljava/lang/Thread;IIII)V
Trap 19: com.ajile.jem.RTS_Exception.trapExtendStack(Ljava/lang/Thread;IIII)V
continueNotify()V
Runtime: Runtime_cldc Configuration: aJ100LCDConfiguration

Fig. 26

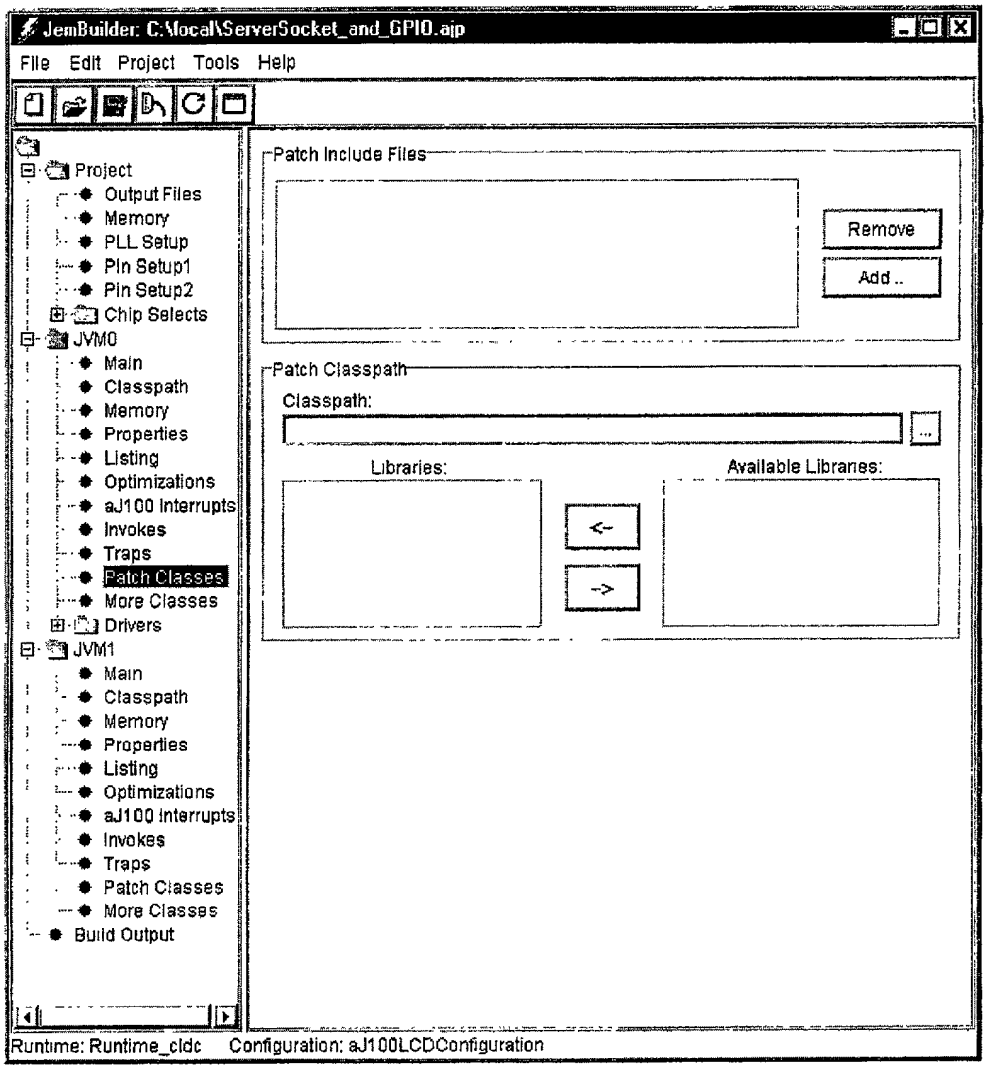
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Patch Include Files
Remove
Add ..
Patch Classpath
Classpath:
...
Libraries:
Available Libraries:
<-
->
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 27

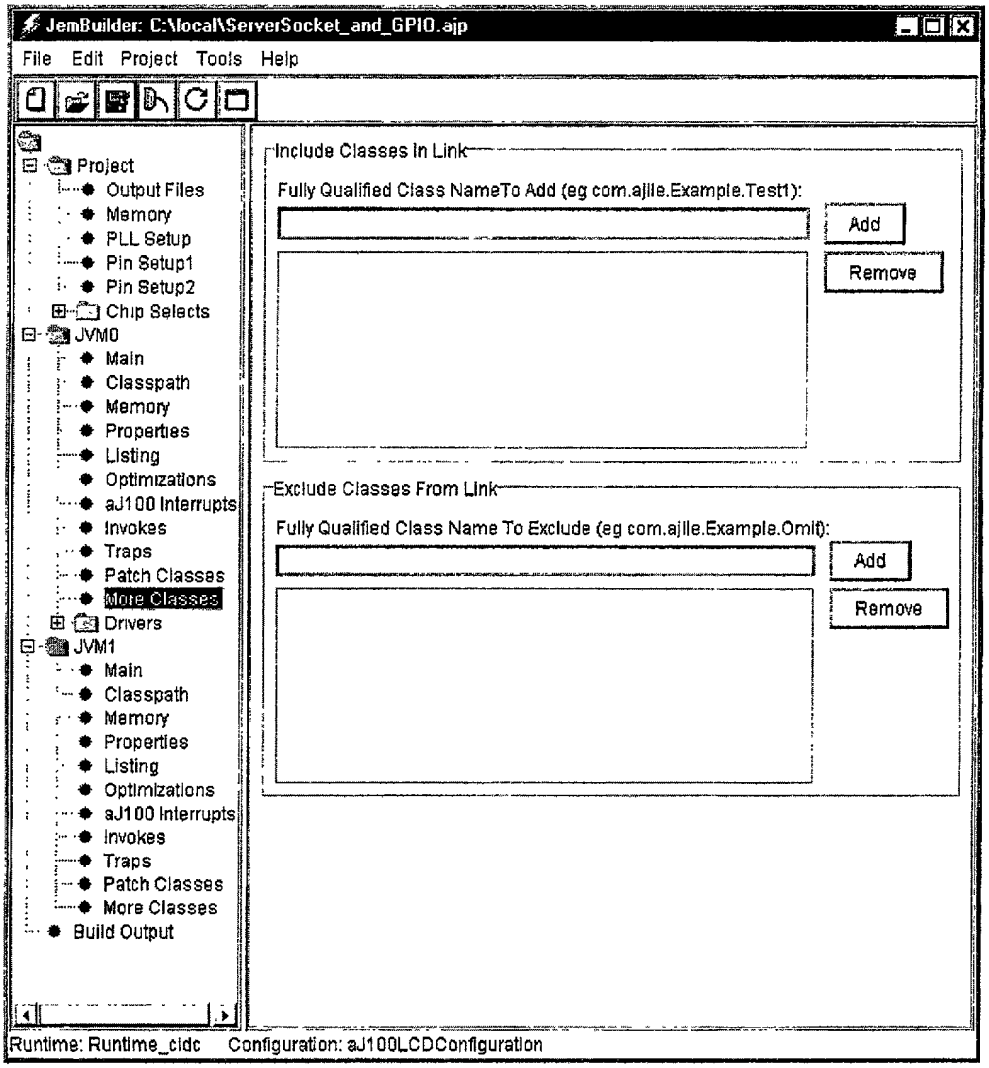
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Include Classes In Link
Fully Qualified Class NameTo Add (eg com.ajile.Example.Test1):
Add
Remove
Exclude Classes From Link
Fully Qualified Class Name To Exclude (eg com.ajile.Example.Omit):
Add
Remove
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 28

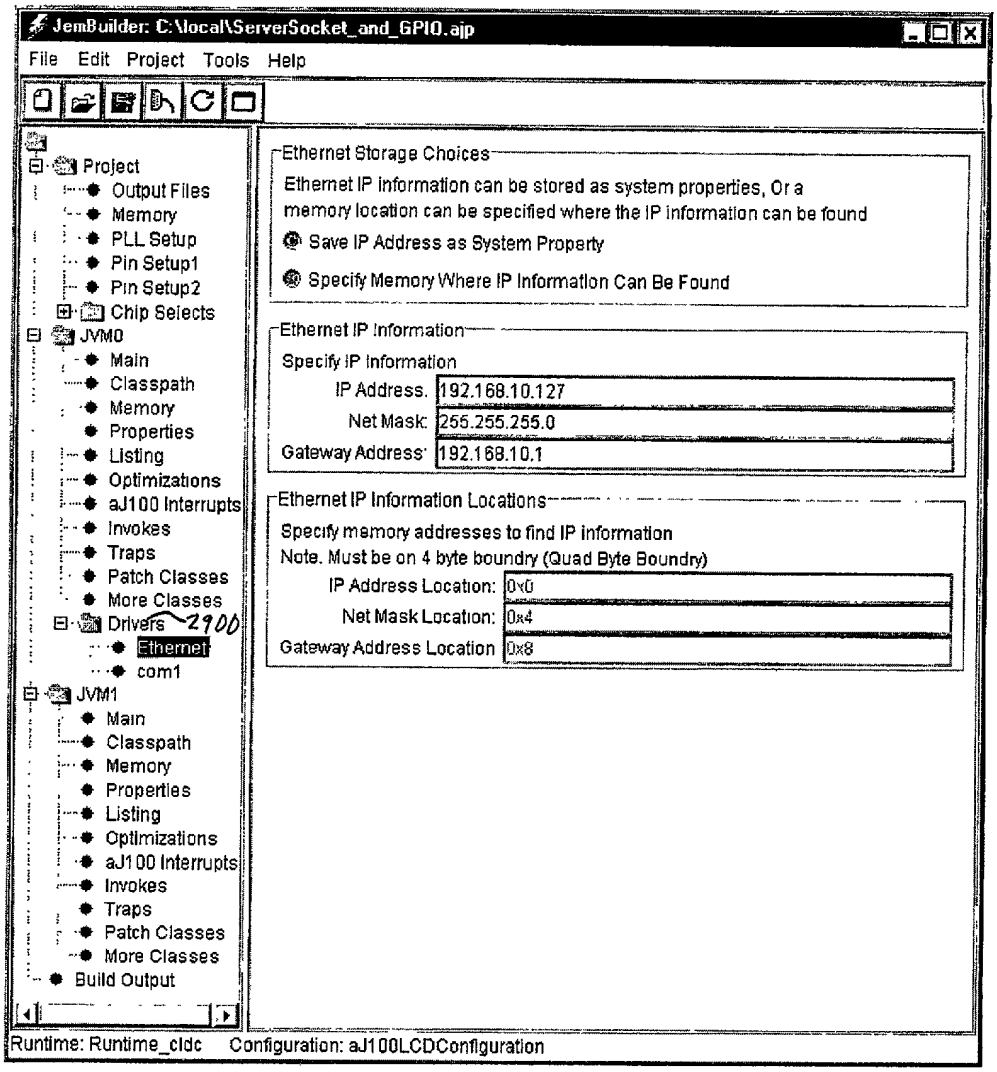
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
2900
Ethernet
com1
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Ethernet Storage Choices
Ethernet IP information can be stored as system properties, Or a memory location can be specified where the IP information can be found
Save IP Address as System Property
Specify Memory Where IP Information Can Be Found
Ethernet IP Information
Specify IP Information
IP Address. 192.168.10.127
Net Mask: 255.255.255.0
Gateway Address 192.168.10.1
Ethernet IP Information Locations
Specify memory addresses to find IP information
Note. Must be on 4 byte boundry (Quad Byte Boundry)
IP Address Location: 0x0
Net Mask Location: 0x4
Gateway Address Location 0x8
Runtime: Runtime_cldc Configuration: aJ100LCDConfiguration

Fig. 29

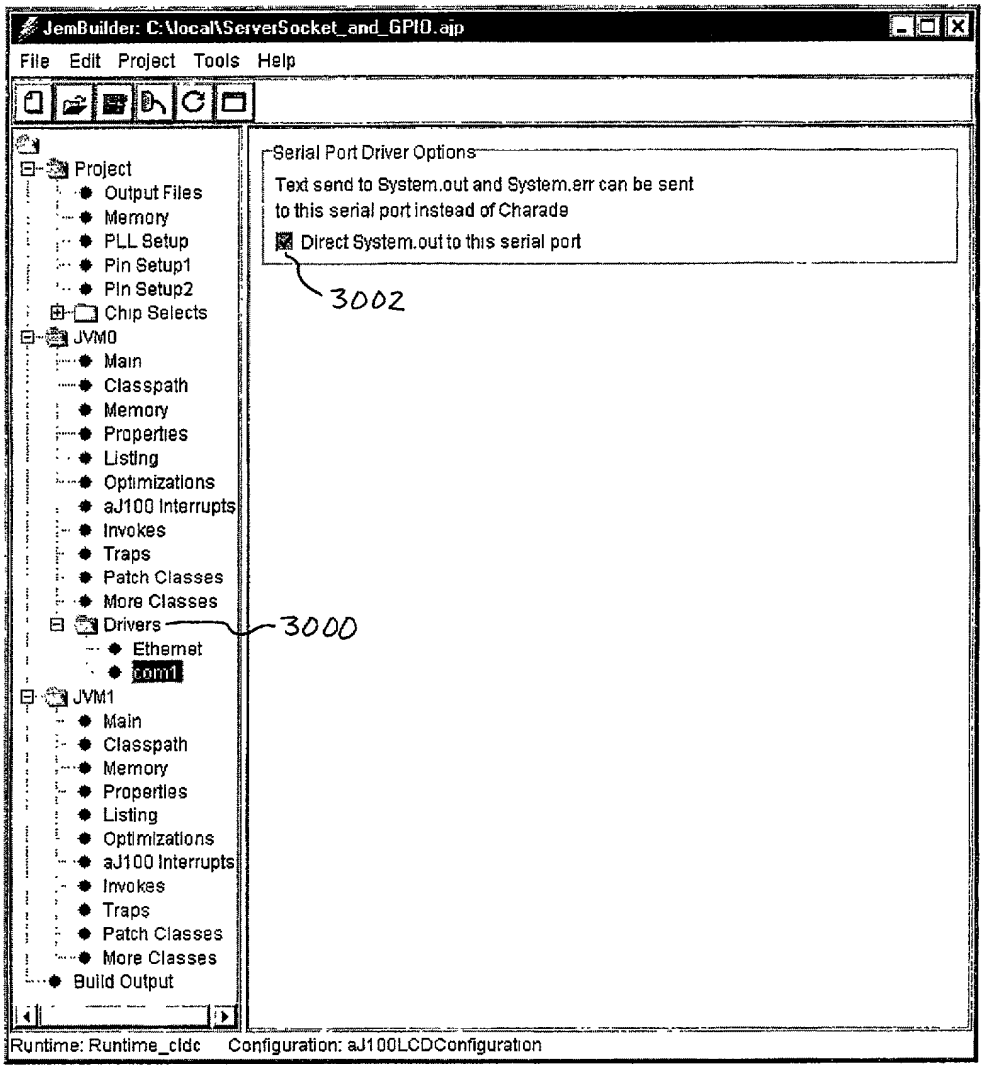
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
Ethernet
com1
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Serial Port Driver Options
Text send to System.out and System.err can be sent
to this serial port instead of Charade
Direct System.out to this serial port
3002
3000
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration

Fig. 30

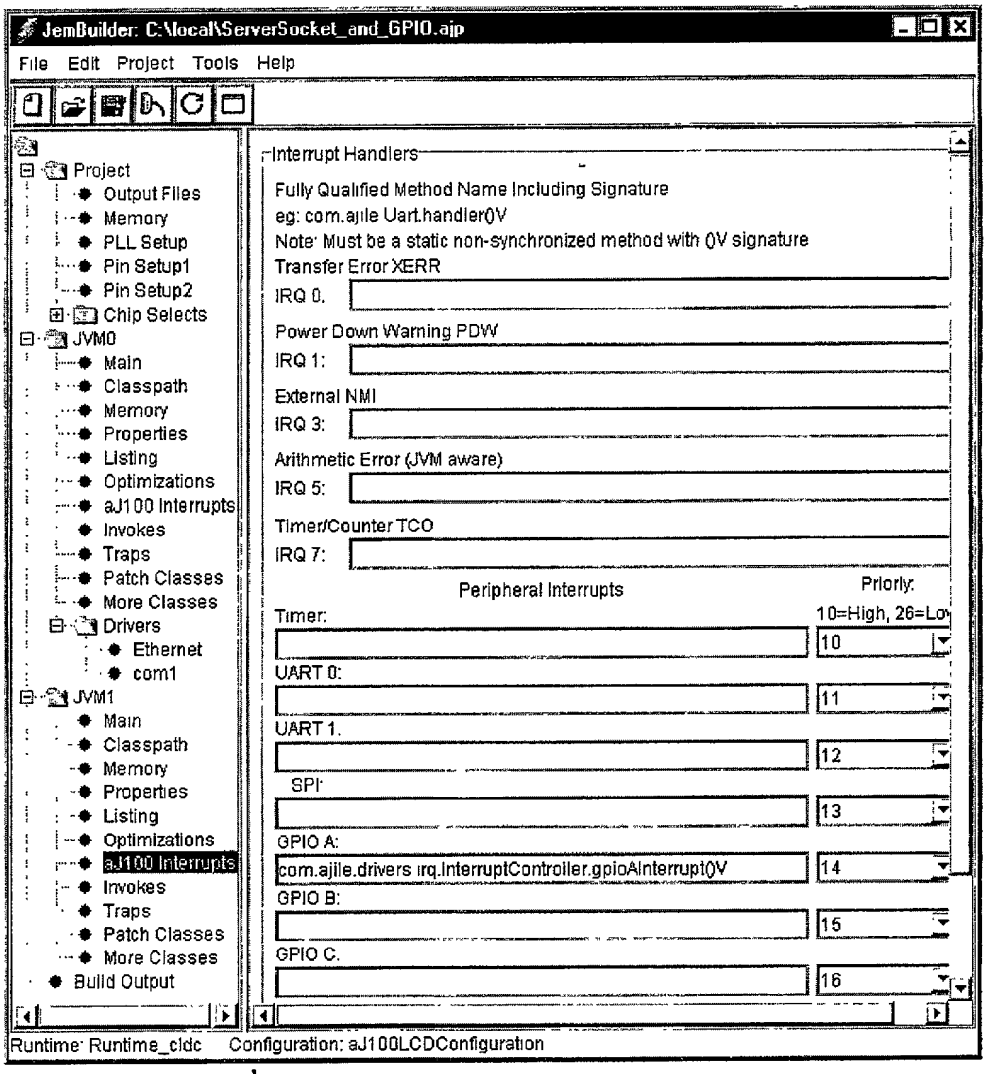
JemBuilder: C:\local\ServerSocket_and_GPIO.ajp
File Edit Project Tools Help
Project
Output Files
Memory
PLL Setup
Pin Setup1
Pin Setup2
Chip Selects
JVM0
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Drivers
Ethernet
com1
JVM1
Main
Classpath
Memory
Properties
Listing
Optimizations
aJ100 Interrupts
Invokes
Traps
Patch Classes
More Classes
Build Output
Interrupt Handlers
Fully Qualified Method Name Including Signature
eg: com.ajile Uart.handler()V
Note: Must be a static non-synchronized method with ()V signature
Transfer Error XERR
IRQ 0:
Power Down Warning PDW
IRQ 1:
External NMI
IRQ 3:
Arithmetic Error (JVM aware)
IRQ 5:
Timer/Counter TC0
IRQ 7:
Peripheral Interrupts
Priority
Timer:
10=High, 26=Lo
10
UART 0:
11
UART 1:
12
SPI:
13
GPIO A:
com.ajile.drivers.irq.InterruptController.gpioAInterrupt()V
14
GPIO B:
15
GPIO C:
16
Runtime: Runtime_cldc
Configuration: aJ100LCDConfiguration
3100

Fig. 31